DOCUMENT RESUME

ED 048 508	52	VT 012 880

TITLE	Cooperative Occupational Education Programs--A Conference Seminar To Extend The Range of Vocational Education. Final Report.
INSTITUTION	City Univ. of New York, N.Y. Div. of Teacher Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-9-0344
PUB DATE	Dec 70
GRANT	OEG-0-9-420344-3750(725)
NOTE	151p.
EDRS PRICE	EDRS Price MF-$0.65 HC-$6.58
DESCRIPTORS	*Cooperative Education, *Educational Change, Educational Needs, Instructor Coordinators, *Program Development, Program Evaluation, *Program Guides, *Vocational Education

ABSTRACT

This guide explains the basic concepts in cooperative education and describes the essential characteristics of effective program development and operation. The guide is the final report of a three-phase institute which developed, implemented, and evaluated plans for new directions in cooperative education. As a result of this investigation, the report provides guidelines and procedures for redirecting cooperative education. Nine papers presented by participants are appended. (BH)

FINAL REPORT

Grant No. OEG-0-9-420344-3750(725)

COOPERATIVE OCCUPATIONAL EDUCATION PROGRAMS -- A CONFERENCE SEMINAR TO EXTEND THE RANGE OF VOCATIONAL EDUCATION

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December 1970

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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ACKNOWLEDGEMENTS

A very special note of appreciation is extended to the following consultant-leaders who provided the information and ideas which were incorporated into this guide.

Louis Cenci, Executive Secretary of the Advisory Board for Vocational Education for the New York City Board of Education

Theodore T. Cote, Chairman, Department of Industrial Education, Temple University, Philadelphia, Pennsylvania

Calvin J. Cotrell, Center for Research and Leadership Development in Vocational and Technical Education, The Ohio State University, Columbus, Ohio

Mary K. Klaurens, Associate Professor, Department of Distributive Education, University of Minnesota, Minneapolis, Minnesota

Gordon Law, Associate Professor, Vocational-Technical Education, Rutgers University, New Brunswick, New Jersey

Thomas J. McNulty, Director of Cooperative Vocational Education, New Jersey State Department of Education, Trenton, New Jersey

Edwin L. Nelson, Senior Program Officer, Work Experience Programs, Vocational Technical Education, U. S. Office of Education, Washington, D. C.

C. Thomas Olivo, Professor, Department of Industrial Education, Temple University, Philadelphia, Pennsylvania

Kenneth Rowe, College of Business Administration, Arizona State University, Tempe, Arizona

Samuel Sains, Manager, Program Marketing, Xerox Learning Systems, Education Group, New York, New York

Jerome Shostak, Education Specialist, Western Electric Fund, New York, New York

It was agreed among participants of the Cooperative Vocational Education Institute that one of the barriers to new program development is a lack of understanding and active support on the part of educators who must be committed to implementation in order that program expansion may be achieved. The Institute provided opportunity for state, local and vocational personnel to react, interact, make judgments and recommendations, and exchange ideas on program operation. Outcomes and successes resulting from Institute involvement therefor reflect a fundamental acknowledgement due each participant who contributed so much to make the Institute a highly professional achievement.

In addition, the Institute Director is genuinely grateful to the following staff members for their time, effort and assistance in making this project a success.

Sally Borneman, Associate, Bureau of Occupational School Supervision, State Education Department, New York City

Allan Freedman, Grants Officer, Division of Teacher Education, City University of New York, New York City

Herman Goodyear, Lecturer, Vocational-Technical Teacher Education Program, Manhattan Community College, New York City

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A final word must also be extended to Dean Benjamin Rosner and Associate Dean B. Alfred Liu, of the Division of Teacher Education of the City University of New York for their advice, assistance, and encouragement which contributed immeasurably to the success of this project.

Donn Billings

New York, New York
December, 1970

SUMMARY

Cooperative vocational education, a program wherein a student receives academic and job-related instruction within the confines of the traditional school, and pursues practical experiences, under supervision, in a commercial and industrial setting, has long been a part of vocational education. However, increased attention to individual needs, the proliferation and variety of new job skills, increased concern over the problems of the economically, educationally, and culturally disadvantaged youth, and mounting costs and built-in obsolescence of traditional vocational-technical programs have mandated a reevaluation and reassessment of cooperative vocational education as a means of relieving the distress in many of these educational areas.

By having industrial and educational leaders meet to define and delineate basic areas of concern in cooperative vocational program development and plan a year-long study of guiding models and practices in this aspect of education, a firm foundation was laid for the final institute. This last phase of the project refined and amalgamated the findings of the consultants and produced the guidelines and procedures for the expansion and redevelopment of cooperative programs to meet the needs of a changing society in a changing world.

It was found that now, more than ever, there is a need and place for cooperative vocational education within the framework of the educational environment of the community. However, greater communication is necessary between the school, industry, parents, and students. Cooperative education must be carefully planned in all of its phases and functions and must be expanded both at varying levels of the educational continum and at varying levels of competencies. Bold new approaches must be introduced in such areas as pupil-scheduling, supervision, teacher preparation, and evaluation if greater strides are to be made and newer challenges are to be met successfully.

The final report, which is a practical guide, introduces the reader to basic concepts in cooperative vocational instruction and attempts to explain, in cursory fashion, the essential characteristics of effective program development and operation.

INTRODUCTORY COMMENT AND BACKGROUND INFORMATION

This report represents the culmination of a three-phase institute on cooperative vocational instruction sponsored by the City University of New York through a grant from the United States Office of Education. The purposes and objectives of the institute were to reassess existing designs and programs in the light of present and future education requirements in order to provide a sound and fulfilling life for each member of our society through gainful and purposeful employment.

While cooperative instruction is not new from a historical point of view, many educators, sociologists and others interested and concerned with the total development of human resources are viewing this aspect of education in new dimensions as the possible solution to many more complex problems of our society. It seems to provide many answers to the problems of the educationally, economically, and culturally disadvantaged by making the total education process more meaningful and relevant. For those students whose aspirations were limited because of the futility of conventional educational practices, there are now new hopes instead of despair, new successes instead of failures, and new economic horizons instead of depression.

This report has evolved into a guide for those who are interested in cooperative vocational programs and new direction to those who seek to extend and improve instruction to serve more students with varying needs and interests in large or small communities -- urban, suburban, and rural -- and who are at various levels on the continuum of educational progression.

Suggestions for the implementation of cooperative programs are the product of a three-part institute for educators concerned with extending the range and quality of vocational education through program expansion and redevelopment.

METHODS

The institute, whose purpose was to reassess the direction and scope of cooperative vocational education today and to propose new methods for improvement of program quality in addition to suggesting means for program expansion and redevelopment, was divided into three phases. Each phase provided foundation and direction for the next step which ultimately culminated in the final document, which is a ready-reference for those interested in some aspect of cooperative vocational education. The total time required for the completion of the institute, its study and the formulation of the final report, has approximately thirteen months, extending from November, 1960, to December, 1970.

Phase I

This phase of the institute was a meeting held in New York City in November, 1969. Prior to the meeting, a steering committee met to determine basic areas of concern in the field of cooperative vocational education. With this initial thrust, ten consultant leaders prepared well-documented presentations to the large group which attended the meeting. Following the presentations, all participants contributed in small group discussions and, later, reconvened to confirm the direction to be taken in the intermediate phase. A complete interim report of this first phase was prepared, printed, and distributed to the participants, the U. S. Office of Education, and others interested. It included not only the presentations, but the salient features of each area of concern and the direction for further study.

Phase II

This phase was the implementation of the plans developed in the preceding phase. The research was conducted during the period of November, 1969, to May, 1970. The ten consultant-leaders investigated guiding models and practices, as previously recommended. Interviews were held with leaders of industry and education. Informal questionnaires were distributed and the results collated and compiled into a composit form. Opinions were solicited from students and parents so that no new proposals were developed in a vacuum but were the results of "grass roots" ideas.

Phase III

The concluding phase of the institute was a conference held in New York City in May, 1970. At that time, the consultants reported on the results of their investigations in a series of presentations which closely paralleled the initial areas of concern. Following the reports of the months of investigations, the participants joined in small groups to restudy and develop each aspect of the study. The results were then crystallized into the guidelines and procedures for

for the expansion and redevelopment of cooperative programs.

This final report is a result of all the study and research. It was further refined and prepared in final form during the period following the last conference until final submission to the U. S. Office of Education in December, 1970.

I. COOPERATIVE PROGRAM DEVELOPMENT

Many years of experimenting have demonstrated that desirable and totally educative results cannot be completely mastered in a school; and along with this idea has come the trend toward cooperative education and training. The paradox of unemployed youth during peak employment reflects a basic need for reassessment of programs intended to prepare individuals for work. Vocational educators have been admonished concerning the importance of leadership and the broader vision needed to administer occupational education as an integral part of the total education system.

A serious need exists for developing a network of vocational instruction in unserved areas. Recommendations reflect the belief that vocational instruction should be maintained and improved, but that sights should be focused on rapidly changing conditions and the corresponding modification of programs. Among areas of suggested improvement are the recognition of vocational education as an essential part of total education; a need for all teachers to gain a greater understanding of the American occupational culture; provision of vocational instruction for every youth at any level; inclusion of occupation orientation along with other disciplines and more breadth and greater comprehensiveness of program. Cooperative vocational education and training may offer helpful and alternative directions for improvement in all of these areas.

Traditional prescriptions and standards of vocational preparatory programs have just begun to adapt to the current problems of unemployed youth, the disadvantaged and underprivileged, and to technological change. Advanced vocational trade shops and three or four-year curriculums are not necessary in teaching all occupations. Programs and their content, as well as extent, must be sorted carefully in order to accommodate educational patterns envisioned for the years ahead. Youngsters and adults alike will be using new techniques and materials which will permit them to learn on their own, in or out of school. The traditional boundaries between school and work need to be erased. Cooperative school-and-work programs will become common if the necessary adjustments and improvements are to be achieved.

Cooperative vocational instruction -- is it a method or a program? Is the co-op scheme truly effective? Might it be more effective than traditional in-school vocational instruction? Could instruction of cooperative character provide a capstone in vocational programs designed for optimum development of all students? Can on-the-job instruction offer a framework for the kind of education which is more relevant to living in today's world? Questions like these plague the vocational educator as he contemplates weeding out narrow specialism in order to grapple with the advantages of innovation and today's rare opportunity to broaden all programs of vocational and occupational instruction to serve the entire community. In the opinion of many experts in the field, cooperative vocational systems of education and training need to be expanded and further developed within the context of a total educational system, and there needs to be horizontal articulation among related problems as well as vertical articulation from prevocational levels through vocational teacher preparation.

The goal of making youth employable, as contrasted to preparing for a particular job, requires involvement of new competencies, disciplines, experiences and research with respect to youth and employment problems. Unless modification of traditional systems occurs, there will be little success in designing educational programs which will be responsive to the present-day needs of students.

The opportunity to develop new systems, new methods and new programs has never been so rich. It appears that creative and imaginative leadership brought together in the type of conference-seminar planned in this institute could provide a setting for presentation, reaction, analysis and planning necessary for coordinating effective design models, and an opportunity to secure approval and acceptance by the professional in the field. It is gratifying to note the extent of acceptance among vocational educators and the degree of willingness to participate in this particular movement. The time, the place, the circumstances and the resources and services should be evaluated and successful experiences need to be disseminated.

The Purposes of Education

As a result of current pressures for relevance in education, educators are re-examining the values of vocational education and training with particular attention to cooperative programs. Attitudes and positions concerning instruction depend upon what is conceived to be the purpose of education and the nature of the programs under consideration. A popular concept of educational purposes is the improvement and development of individual talents and capabilities in order to increase the options of people. At previous times, and even today by some educators, the emphasis has been on preservation of the culture and development of national manpower.

These are not conflicting purposes. By focusing upon the needs of individuals rather than the needs of society, it is suggested that educational programs are adjusted to individual needs, as opposed to matching individuals with educational programs to achieve broader societal or national goals. In effect, however, the programs designed to meet the needs of individuals satisfy societal needs because people are being prepared to cope with the environment in which they live. The real difference in current philosophy is that educators are planning instruction to satisfy the needs of people rather than selecting people to receive certain programs of education and training.

"Improvement of individual talents and capabilities" may be narrowly interpreted as "the development of occupational capabilities." Even vocational educators have instructional goals which incorporate terms such as "the whole individual," "self-realization," "critical thinking," "habits of inquiry," and "learning how to learn." Although vocational instruction may have originated because of a need for trained manpower, today it is the individual and his needs which has become the prime consideration in educational program planning. Occupational competencies and orientation to the world of work serve as a core or frame of reference wherein the individual learns to implement all of the skills acquired in the total educational process -- communication, computation, the humanities, science and the practical arts -- to satisfy his needs and goals. By helping individuals make a satisfactory and satisfying adjustment to the life of a productive adult citizen-worker, the societal goals are also achieved.

Within these educational aims the purposes of cooperative vocational instruction may be identified as follows:

1. to develop a well-balanced combination of vocational competencies enabling graduates to enter and advance in satisfying careers
2. to develop the necessary social skills, work attitudes and habits for job tenure and/or entry into other vocational instructional programs
3. to help individuals develop viable career plans based on realistic self-appraisal and accurate occupational information
4. to facilitate the transition from school to productive work.

Cooperative Vocational Education and Training Defined

The definition given in Part G of the Vocational Education Amendments of 1968 is the one used here, since it specifies the broad conditions under which special cooperative programs are funded, and also defines regular cooperative vocation instruction as follows:

> "...a program of vocation education for persons who, through a cooperative arrangement between the school and employers, receive instruction, including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field, but these two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his employability. Work periods and school attendance may be on alternate half-days, full-days, weeks, or other periods of time in fulfilling the cooperative work-study program."

Regardless of legal definition and the communication efforts of various authorities and groups responsible for program development and funding, cooperative vocational instruction means different things to different people. Various interpretations evolve from the purposes people seek to accomplish through the co-op method. Students, employers, counselors, school authorities and administrators interpret cooperative programs in light of their own goals.

From the student's point-of-view, cooperative instruction offers opportunities (1) to earn and learn at the same time; (2) to be reasonably certain of employment after graduation; (3) to identify with the world of work in a meaningful way; (4) to improve abilities and interests in real work situations; and (5) to acquire skills and knowledge needed to realize personal aspirations and goals. Individual students may be seeking any combination of these purposes -- or have a singular purpose, such as the need for financial assistance. Whatever these individual purposes may be, cooperative vocational programs can be structured to achieve them -- as well as the purposes program-planners seek. Students who enroll with the aim of earning money can probably also profit from the training; and the cooperative experience can be planned to be both an earning and a learning experience.

From the employer's point-of-view, cooperative vocational programs are likely to be viewed as (1) an investment in the training of youth, creating good will for the firm, and possibly alleviating unemployment problems of high school graduates; (2) a source of part-time employees who supplement the regular work force during peak-hour periods; (3) a source of employees who have received special instruction and developed certain skills necessary to perform specific jobs and (4) a source of career-oriented, full-time employees who can be trained from the ground up. Cooperative vocational instruction can be implemented to achieve any or all of these goals. Even though some employers suggest that all a student needs is a good general education, they show preference for hiring specially trained and school-selected individuals.

From the counselor's point-of-view, and to some extent other faculty members in public schools, cooperative vocational programs represent (1) an opportunity for students to test interests and capabilities in real work settings" (2) a way of helping students make a successful transition from school to work; (3) a program for students who require a more practical type of learning experience than the school classroom is able to provide; (4) a way of helping students overcome certain handicaps to learning such as financial needs, low self-esteem, self-discipline, and inappropriate companionships; and (5) a method of helping students progress toward career goals.

The counselors and other teachers have considerable influence on how students view a program. While cooperative instruction may serve any one of these purposes, it provides the student benefits at the same time.

From the school administrator's point-of-view, a cooperative vocational program is (1) a way of providing relevant educational instruction for the majority of students who cannot attend college with state and federal assistance and minimal expenditure of local funds; (2) a means of utilizing community resources to enrich the instructional program of the school; (3) a vehicle for relating the classroom instruction to the needs of people, business and industry in the community; (4) a program which provides an effective liaison with the community, thereby creating goodwill for the school.

With the current pressure on administrators to evaluate educational instruction in terms of costs and benefits, and to account for the resulting expenditures, cooperative vocational programs are unusually attractive because outcomes are measurable, and they are comparatively economical.

Essential Elements of Cooperative Vocational Programs

Three quarters of a century of experience with a variety of types of co-op programs provides sufficient evidence to identify highly essential elements and characteristics of effective programs. Although there is some lack of formal research substantiating the conclusions, individuals who have worked closely with cooperative education and training generally agree on the following elements as essential in quality instruction.

1. A well qualified, highly dedicated teacher-coordinator
2. Related instruction focusing on technical competencies, career development and occupational adjustment
3. Adequate time for the teacher-coordinator to supervise in-school and on-the-job learning
4. Adequate facilities, equipment and materials to provide instruction related to the student's job and career goals
5. Placement and instruction matched to the student's career interests, abilities and aspirations
6. Pre-vocational education and guidance services which prepare students for selecting the most appropriate training opportunity
7. A student-directed youth organization such as FFA, DECA, VICA, OEA.
8. Identification of a particular type of cooperative program to serve the needs of students with different abilities, career interests, and aspirations -- including the disadvantaged, the private school students, and the school leavers
9. Full wages and credit toward graduation for students while receiving on-the-job instruction
10. Written training agreements and individual training plans developed and agreed upon by the employer training sponsor, student, and coordinator

11. Community involvement in planning, organizing and supporting cooperative programs

12. An advisory committee composed of representatives from business, industry, labor, the school and students enrolled

13. Compliance with all state and federal laws regarding employment

14. Continuous evaluation and revision based on follow-up of student-trainees and achievement of program objectives

15. Ancillary services to provide in-service teacher education, supervision, development of curriculum materials, evaluation, and research for improvement of cooperative vocational instruction

16. Adequate funds to support a quality cooperative vocational program.

II. OCCUPATIONAL NEEDS AND OPPORTUNITIES

Vocational needs are derived from the basic drive to survive. In the process of maturing, young people learn that in order to survive they must go to work.

The Need to be Employed

When parents have made only minimal provision for survival, or when the provisions are considered less than adequate in the eyes of youth, the desire to be employed assumes importance at an early age. For some children this occurs between ages 14 and 16. When young people leave school without vocational preparation they experience high rates of unemployment -- up to 15 percent -- or go to work in jobs which offer little security or acceptable levels of survival.

The Need to Learn an Occupation

Most recognized occupations and jobs which are able to support an acceptable level of survival require educational and occupational preparation. This is a reality for most jobs and for most individuals who must be employed. A good general education and mastery of basic skills is no longer adequate preparation for entering most occupations. Additional education and training are required to advance in a career or to adapt to technological change.

For most students, learning an occupation means more than acquisition of technical information and specific job performance skills. Work habits and attitudes -- formerly developed at home through household activities and identification with parental occupations -- must be acquired through planned training before the young person is considered employable. Students who are insensitive to the environment and to the people with whom they work, or who cannot manage their personal lives as they relate to job performance, may find it difficult to obtain and hold jobs. Occupational preparation includes a good general education, specific technical knowledge and skills, and occupational adjustment competencies.

The Need to Choose An Occupation

Many young people need to be employed upon graduation from high school -- even though some continue in 13th and 14th year programs -- and others receive vocational preparation in four-year colleges. In order to make educational plans and select appropriate occupational preparation, students should consider an occupational field while they are still in school.

With the rapid changes in employment and the relatively long period of training required for many careers, it is crucial for young people to make wise choices. Individuals may still change career plans and return to school for additional instruction; but floundering from one occupation to another is costly to both the individual and to society. Few young people have had enough exposure to the world of work to be able to make appropriate choices and educational plans.

The Need to Learn about Occupations

An individual must learn about occupations in order to make a wise choice and appropriate educational plans. Prior to the time these decisions are made, young people have had little exposure to the world of work and thus, no concept of how their individual interests and abilities are related to occupations. The vocational counselor finds it difficult to acquaint students with occupational opportunities because of the over 22,000 possibilities and the constantly emerging new occupations. People learn about occupations through exploration.

Cooperative Vocational Programs and Vocational Needs

Cooperative vocational programs are uniquely suited to the vocational needs of people -- particularly the needs of youth. The young person choosing employment goes to work and at the same time learns occupational skills which help him qualify for satisfying jobs. Through direct exposure he learns about occupations and how they relate to his interests and abilities. The process of choosing an occupation is facilitated because the student realizes that in order to be employed he must choose an occupational field and train for it.

In addition to the occupations for which schools offer excellent in-school training, cooperative vocational programs satisfy a variety of vocational interests and demands in many different employments. Cooperative programs are relevant to the vocational requirements of people because the instruction is adapted to the learner and to the occupation for which the learner is being prepared.

Individuals to be Served

The Vocational Education Amendments of 1968 set aside a special authorization for cooperative vocational programs in areas of high youth unemployment and dropout rates. Schools which qualify for these programs may receive up to one hundred per cent reimbursement. Any student in the area may enroll regardless of his own disadvantages or prognosis for employment. State Boards of Vocational Education determine which areas are to be given priority in the allotment of these special funds. They are to be used for students who are likely to have the greatest need for cooperative instruction and to encourage the development of cooperative programs in areas where these students attend school. Most students could benefit from co-op instruction, but a school must decide which students will be given priority in allocating available funds. The following priorities are usually considered.

1. Need to be employed following graduation from school

2. Need employment in order to remain in school

3. Need more practical instruction than is provided

4. Need the stimulation and reinforcement of a work setting to make education more meaningful

5. Need to explore the world of work in order to develop job interests

6. Have occupational interests and abilities which are related to available instruction and on-the-job training

Individuals at varying age and grade levels may be served by cooperative programs. The following categories may be included.

1. 14-15 year-olds who require employment and need to learn about occupations and learn a specific job

2. 16-18 year-olds who require employment and need to learn an occupation

3. Post-secondary students who require employment or need on-the-job training in order to learn an occupation

4. Out-of-school youth and adults who need to learn an occupation, including those who have dropped out of college or other institutions

A school system is limited only by resources and philosophy with regard to meeting the vocational objectives of its students.

Manpower Needs and Job Opportunities

All official reports on manpower needs and job opportunities clearly indicate that young people will need occupational preparation to qualify for employment in current and future job markets. The number of jobs available to the unskilled workers and high school graduates without specific occupational preparation is rapidly decreasing. In a cost-conscious economy employers hire only those workers who are able to contribute to the productivity of their business and thus want some evidence that applicants are capable of performing the work.

Occupations to be Taught

The individuals requiring employment must be prepared for the occupations and jobs which are available. Therefore, vocational training programs must be responsive to changing manpower needs, and to the diversity of occupations for which education and training are required. The goods-producing industries will continue to employ trained operatives and assembly workers, but not in the same proportion of the labor force as in the past. Service occupations, which include jobs in the fields of transportation, communication, utilities, wholesale and retail trades, finance, insurance, real estate and government at all levels -- and personal service jobs such as waiters, hairdressers, laundry help and others -- are rapidly increasing as a percentage of the total number of people employed. The President has urged that the public schools give greater emphasis to preparation of employees in the construction crafts.

In addition to the traditional cooperative vocational programs for trades and industry, distributive, office, health, home economics-related, and agricultural-related occupations, schools must develop cooperative programs to provide training for the wide diversity of occupations found in the labor market. Training for personal and public service jobs and new and emerging occupations is necessary to meet manpower needs and to extend employment opportunities to the vast number of young people who have not been served by the traditional programs. Personal service jobs were relatively easy to enter in the past. Today, however, with the increasing demand for services and the resulting competition among firms engaged in personal services, employers select workers who have special competencies and experience.

Public service jobs are also increasing, not only at the professional level, but for semi-professional occupations and for aides who assist in carrying out public service functions. Such occupations as teacher-aides child care-aides, playground leaders, park and building maintenance workers, and welfare agency clerks offer opportunities for employment to people who have special training. Some rewarding jobs are available in government planning and reporting agencies such as housing, public health, environmental control, and law enforcement.

Co-op Placement Opportunities

In the past, locating employers who were willing to participate in cooperative programs and who were able to provide training has not been a problem. Their enthusiastic support is usually the result of having had student-learners who were eager to learn and who were receiving help and supervision from a teacher-coordinator in the school

Many large firms have made it a company policy to employ cooperative trainees from high schools and post-secondary institutions because considerable attention is given to helping these students choose appropriate occupations and obtain in-school instruction that is related to the jobs. It has become increasingly necessary for young people to have help and supervision in making the transition from school to work.

Many more employers would welcome the opportunity to provide placement opportunities for young people if the schools would provide the needed related instruction and assistance in developing proper work habits and attitudes. An increasing number of government and public service agencies are utilizing cooperative programs to develop new employers who are dependent upon the public schools for occupational and vocational preparation.

The public employment service agencies are encouraged to work with the public schools in arranging placement of co-op students in a variety of jobs. These trainees are one of the few categories of applicants who are not expected to have previous experience in order to be employed.

While it may be possible to enlist the cooperation of many employers for a variety of jobs, the school must be responsible for selecting appropriate training opportunities.

A survey of advisory committee members indicated that the following factors should be considered in selecting employers and businesses to participate in a co-op program.

1. Ability and willingness to provide adequate and genuine training
2. Need for trained workers in the field
3. Compliance with labor regulations (wages/hours/safety)
4. Reputable moral and ethical practices
5. Opportunities for increasing responsibility and advancement
6. Availability of training and supervisory personnel
7. Willingness to pay prevailing wages
8. Convenient commuting distance from school and home and convenience of transportation
9. Ability of the school to arrange appropriate related instruction
10. Transferability of skills learned on the job
11. Variety of experiences and exploration of the broad occupational field
12. Appropriate jobs for the age group being placed
13. Freedom from undue physical or psychological strain
14. Meaningful work activity related to student's interests and ability
15. Equipment and facilities adequate for the occupation
16. Need for part-time help during hours student is available for training

Flexibility and Change

One of the most important and unique advantages of co-op instruction is its adaptability to the continually changing manpower requirements. Newly emerging occupational placement and related classroom instruction can be adapted to these changes. The availability of placement opportunities is a reflection of the numbers and types of workers needed; thus, the number of workers trained in any occupational field is in line with the employment needs.

To further insure that the vocational preparation and training is relevant to current manpower needs, co-op programs are usually guided by advisory committees composed of representatives from the employment community in which the co-op instruction is offered. The vocational advisory committee is able to help the school maintain a good relationship between manpower needs and the training offered, and identify appropriate employment opportunities.

Advisory committees assist program development by identifying education and training possibilities in new and emerging industries through at least seven major activities.

1. Conducting periodic reviews and surveys of employment needs
2. Communicating frequently and openly with school officials about training needs
3. Keeping abreast of change in local, regional, and national labor markets
4. Communicating with other employers and labor groups and enlisting their participation in cooperative education and training
5. Consulting with industry, professional and business groups at the local, regional, and national levels to ascertain employment trends and future training needs
6. Endorsing and sponsoring new types of programs
7. Anticipating the effects of technological change, business fluctuation, labor negotiation, and other developments as they relate to cooperative vocational programs.

Cooperative vocational programs at both secondary and post-secondary levels offer the most effective and economical means of keeping vocational instruction relevant to manpower needs and serving a diversity of occupations. By utilizing the facilities, equipment and training personnel of the employment community, the training is kept up-to-date with current and emerging business and industry practices at a minimal cost to the school. There is a rising surge of interest among employers and representatives of industry in cooperating with the schools in developing trained employees. There are three seriously critical factors in developing flexible and relevant co-op programs:

- securing school administrative support
- developing advisory committee help
- employing capable supervisors or teacher-coordinators who are willing to explore and develop new programs.

III. PROGRAM ORGANIZATION AND ADMINISTRATION

Traditional patterns for cooperative vocational programs have centered around broad occupational fields, namely trade and industrial occupations, distributive, office and, more recently, health, home economics-related and agriculture related occupations. In schools where there are sufficient numbers of students interested in specific occupations within one of these fields -- and related placements exist -- there are specialized co-op programs for occupations such as automobile mechanics, nurse's aides, service station attendants and food service workers. Ideally, a comprehensive high school would be expected to have programs for at least three or four of the broad fields and employ at least one occupationally and professionally qualified teacher-coordinator for each field.

Organizational Patterns For Secondary Schools

The development of cooperative programs for these traditional vocational areas at secondary level is an extension or variation of the program areas established by the Smith-Hughes Act and subsequent legislation to provide vocational education for major occupational fields. Over the years occupations have been identified for each of these fields and instructional programs developed in which the cooperative method was utilized.

Small schools in rural communities where there are fewer participating employers in each field, and not enough students desiring training in any one area, have established diversified or multi-occupational programs. The teacher-coordinator for such a diversified-type program is usually occupationally competent in at least one of the fields, and by working with other teachers and on-the-job trainers, is able to plan a related program of instruction for students in other fields. Frequently, however, the instruction is so general that it has little immediate application to the jobs. This is largely the result of grouping too many students in one class and giving them all the same instruction without regard for the specific competencies required. Diversified occupations programs have been effective only when the teacher-coordinator worked full-time with a limited number of students -- not more than twenty -- and was able to offer individualized instruction.

Both of the above organizational patterns tend to limit the training to a few major occupational fields. Students who were not interested in the occupations for which training was offered could not get vocational preparation or they were channeled into training that was unrelated to their interests or to their capabilities.

In many schools the programs have become quite selective and students whose interests and capabilities do not meet the program standards are not allowed to enroll or are dropped when they do not progress to expected standards. In other schools, the co-op method is viewed as a way of providing instruction for students who have not done well in school and, thus, the programs become "dumping grounds" which no one really chooses to enter.

Both of the above practices tend to destory the purposes of cooperative vocational education -- to prepare ALL students who can benefit from preparation for satisfying and satisfactory employment.

Organizational Patterns for Post-Secondary Schools

Cooperative vocational instruction in post-secondary institutions -- junior and community colleges and area vocational-technical schools -- does not differ greatly from secondary programs except in scheduling and the level of the occupations for which training is provided.

Since the students are somewhat more mature, they are likely to be more committed to career goals. The related instruction and the on-the-job training are often designed to prepare the students for middle-management, supervisory or technical-level jobs. Less attention is given to occupational adjustment and attitudinal change because post-secondary students are eager to acquire the skills and knowledge needed for advancement.

On-the-job instruction and experience are frequently scheduled in blocks of full-time employment rather than concurrently with in-school instruction. The coordinators of these programs are sometimes referred to as placement coordinators for particular vocational fields which they supervise. Many have coordination and supervision as a full-time responsibility during the block of time when students are on the job. They may be active the year around if there are always some students receiving on-the-job instruction through employment.

Organizational Patterns for State Departments

State departments of education are involved in the development and administration of local cooperative vocational programs because most local programs are partially financed with state funds. It is the responsibility of the state department personnel to supervise the allocation of state monies to programs which serve the purposes for which the money was intended. More importantly, state departments are structured to provide guidance and leadership in the establishment and operation of programs.

Traditionally, the supervision and administration of cooperative programs has been the responsibility of state supervisors in each of the occupational fields which have co-op programs. Multi-occupations programs would be the responsibility of one of the supervisors who might consult with the other vocational supervisors regarding matters relating to occupations in their field. Thus, state leadership has tended to perpetuate the organization of co-op programs around the vocational fields -- trade and industrial, distributive, office, agriculture, home economics, and health. With this type of organizational pattern the vocational and quality of related instruction in cooperative programs are maintained. However, there is considerable variation in the numbers and types of cooperative programs in the percentages of a vocational field supervisor's total responsibility. The attitude of a state supervisor toward co-op instruction is critical in the amount of effort expended to develop new programs.

In some states there are state department personnel whose responsibility is to coordinate the activities of vocational field supervisors in the development and administration of cooperative vocational programs. In this way lines of communication among the fields are maintained, as are consistent policies. A more recent trend in state supervision is the appointment of supervisory personnel whose sole responsibility is the development and supervision of co-op programs. The rationale for having such specialized state-level personnel is that cooperative instruction, in itself, is needed by a large proportion of the schools and specific capabilities of certain individuals for this purpose is the prime concern rather than specialization in certain vocational fields. This new pattern of state supervision is in line with the intent of the 1963 and 1968 legislation -- to provide cooperative instruction for more individuals and particularly those who would not be served by the traditional programs. It is the responsibility of state supervisors to provide assistance to local schools in program development, expansion, and improvement. The state supervisors in the several vocational fields serve as consultants in the development of co-op programs for their respective fields, but the co-op program specialists are expected to concentrate their activities on development of programs that cut across vocational fields or that may have little relationship to the traditional fields of employment in vocational instruction.

Urban Administrative Patterns

In large cities where a number of schools are placing co-op students in the same employment community, it is advisable to have a city or area supervisor or coordinator of co-op programs. The functions of the supervisor are to maintain a balanced program and consistent policies for the entire city, to communicate with the school administration, management, labor and other concerned community groups, and to coordinate the activities of individual teacher-coordinators in each of the schools.

A similar position with the same functions is needed in many counties or in employment communities where there are several school districts with cooperative programs. This may require shared costs among the school districts or, where the area involves a large number of schools, such a position maybe administered and financed by the state department of education. In some areas there are schools from more than one state placing students in the same employment community and some coordination of interstate program operation is necessary. Lack of coordinated efforts among schools and school districts in the same area results in duplication of efforts, imbalance in the number of students trained for some occupations, and confusion for employers who must deal with a number of schools, each of which may have different policies and modes of operation.

Large High School Organization

In cities of medium size where there is a single large high school, or possibly two or three such schools, it may not be necessary to have a supervisor of co-op programs as long as teacher-coordinators of the various individual programs work together to develop balanced programs and consistent modes of operations. The needs of students are better served when the programs are coordinated. A truly comprehensive high school should offer co-op programs for most of the occupations in which students are likely to be employed following graduation. These may be organized around the several broad occupational fields or for specific employment within the fields. When there is sufficient demand for co-op instruction in a single field, another section should be added, the point being that programs are organized to serve the needs of individuals.

Vocational High Schools or Occupational Centers

Presumably, the metropolitan vocational high schools and area occupational centers in rural areas would have sufficient numbers of interested students to have at least several co-op programs in broad occupational fields, and possibly programs for several specific occupations such as auto mechanics, cosmetology, and practical nursing. If the school has full-time vocational teachers in each of the occupations being taught, on-the-job training for all of the occupations may be supervised by a placement coordinator who has that as his sole responsibility. Under these circumstances a coordinator may work with large numbers of students who are receiving related classroom instruction from other teachers.

The vocational high schools and area centers usually serve a multi-school district and students come to the vocational school or center to receive instruction not provided in their home schools. Through this approach, it may be possible to serve more specialized interests and plan the total in-school instruction around the student's career interests.

Small School Programs

There are two basic patterns of organization in small schools. One is the diversified occupations arrangement in which one teacher-coordinator works with fifteen to twenty students per group. He can handle only a limited number because individualized instruction must be provided.

An alternative pattern in small systems is to have a teacher-coordinator serve several schools on a shared-time and cost basis. It is usually better for the coordinator to travel between the schools, although students may be bussed to a school where the instruction is offered. One school may offer instruction in one field, and another school in a different field.

Scheduling Patterns

Another dimension of organizational planning is the scheduling of in-school and on-the-job instruction. Traditionally, most high school co-op on-the-job employment has been conducted concurrently with in-school instruction on a one-half day basis. The advantages of this plan are (1) the student is able to apply what he has learned in school to his job immediately, and (2) employers can arrange work hours to meet their needs for part-time help. A variation of this plan is one in which two students hold one job, with one student working in the morning and the other student working in the afternoon, and also alternating in-school instruction. This is a desirable arrangement when the number of employers is limited or when it is difficult for employers to provide work stations on a half-time basis.

On-the-job instruction may be scheduled on alternate days or weeks. The advantages of this plan are that (1) the student remains in one place, either school or work for an entire day, thus saving travel time, and (2) he experiences a total day's work with possibly better learning value than the half-day exposure. If the students are on the job continuously for a week or two at a time, the employer can provide concentrated training for tasks which may require a lengthy learning period. Two students can hold the same job under this plan -- one student on the job while the other student is in school and reversing the roles on alternate days or weeks. For some students alternate periods of a week or longer away from school may inhibit their educational progress. Unless there are large numbers of students it may be difficult to schedule other high school subjects on the alternate day or week plan.

Other scheduling patterns are possible --

- In-school instruction during the school year; employment in the summer
- Employment training during day-time hours, school in the evening

IV. PROGRAM OF INSTRUCTION

A planned and coordinated program of instruction on the job and in school is the essential element of co-op education. It makes the difference between a learning experience and part-time employment. Instruction is planned to develop vocational competencies and capabilities which students require in order to enter into, adjust to, and advance in the world of work.

Correlated Instruction

On-the-job training and in-school instruction are coordinated in such a manner that students learn to apply the concepts and skills they learn in school to real jobs and work settings. The student's career objective and the occupational competencies he needs to achieve his goals are the basis for planning his program of instruction. A teacher-coordinator, or sometimes a full-time placement coordinator, is responsible for identifying student career interests and instructional needs; placing the student in a job related to his needs, interests, and capabilities; and in close cooperation with the employer and the student, planning a program of instruction that will develop the individual student talents and capabilities which contribute to personal and occupational adjustment.

As the student moves through the program, his achievement and progress are evaluated periodically by the employer, by the teacher-coordinator, and by the student. The teacher-coordinator advises the employer when a student has learned concepts and skills in school which may be applied on the job. The employer advises the teacher-coordinator when the student requires in-school instruction or special help in order to satisfactorily perform his job.

In-School Instruction

Students enrolled in co-op programs receive instruction in the academic courses required for graduation and in related vocational instruction designed to improve personal-social skills. The programs provide needed basic education to develop specific occupational skills and knowledge. A remedial program in basic skills may be necessary if the student is to progress satisfactorily. In order to graduate, students are required to complete certain academic courses. In addition to the advantages of securing a high school diploma, co-op students should have a background in the social studies, English and the humanities, basic math, science and health for their personal development and total adjustment.

The related vocational instruction varies with the vocational needs of students, their abilities and interests, the occupations they are studying, and the work environments in which they are receiving on-the-job instruction. Related instruction may include remedial help for students who are deficient in the basic academic skills necessary to succeed in their occupations. For some students occupational adjustment to develop personal-social skills and work habits and attitudes should be a major focus of the related instruction. We are repeatedly reminded by industry that work attitudes and habits of youth are of major concern to the employers.

The occupational objective of each student has a bearing on what technical skills and knowledge should be learned in school. Manipulative skills such as handling tools, or typing required practice before students are able to apply these skills on the job. There are related theories and concepts for each occupation that are best learned in school. Learning how to learn, taking responsibility for one's own personal and occupational development, and recognizing the necessity of continuing education are important outcomes of planned in-school instruction.

Related General Instruction

Some of the related instruction, such as co-worker relations and work attitudes, is necessary for the vocational success of students in all occupations and is taught through group methods -- case problems and class discussions -- which facilitate the exchange of experiences and value judgments.

Field-Related Occupational Instruction

Other skills and knowledge which are necessary for students in some occupations, but not for all students in a program, are taught through small-group techniques. Within a class of office occupations, students may be employed in insurance, government, medicine, or industry -- and each group requires some instruction which is peculiar to the specific industry. The more homogenous the occupations and the students interests and abilities, the more group instruction may be utilized.

Specifically Related Individual Instruction

Each occupation in which a group of students is employed is likely to require some highly specialized information or skill. In a multi-occupations program, or where students' needs for related instruction are quite diverse, most of the instruction must be highly individualized. The teacher becomes a resource person or classroom supervisor of directed studies who assists each individual's study as it relates to his occupation.

On-The-Job Instruction

Learning on the job does not just happen -- it is planned. A teacher-coordinator who knows the interests and capabilities of his students, and is knowledgeable about the needs of industry, enlists the cooperation of employers in placing students in jobs which will contribute to each student's vocational development and employability. The teacher-coordinator, the employer and the student jointly develop a written training plan which lists the learning experiences the student will have in school and on the job. In addition to the schedule of learning experiences, the responsibilities of the student, the teacher-coordinator and the employer are customarily specified in writing and may be signed by each of the three parties.

The employer provides the work setting, training and application of occupational skills, supervision and paid employment. Industry is eager to provide the instruction for students who are ready to learn a job and who will have the help of the school with basic skills and theory related to the occupational field. The teacher-coordinator is expected to visit the employer, or an appointed supervisor of the training, on a regular basis to discuss student progress and coordinate in-school instruction with on-the-job training. The teacher-coordinator may have to advise supervisors on how to supervise and train students.

The quality of instruction on the job depends on the understanding and agreement between the teacher-coordinator and the employer. The school must prepare students to profit from the training which industry is equipped to give. Industry will participate with cooperative vocational programs as long as the output is a supply of trained, well-adjusted workers.

V. FUNDING RESOURCES AND CRITERIA

Funds for financing co-op programs are available from three sources -- local schools, state boards of vocational education, and the United States Government through allotments for vocational education. Local schools make application to their state board of vocational education for state and federal reimbursement. It is the responsibility of the states to establish priorities and formulas for sharing program costs with local schools.

Local Funds

Local schools may receive up to fifty per cent of the costs of operating a regular cooperative vocational education program, and up to 100 per cent of the costs of operation, if the school qualifies under the priority system of the state board of vocational education, to encourage the development of new programs in areas of high youth unemployment and school leaving. A program may also be supported entirely with local funds.

When local school boards consider the benefits of co-op programs to the community in terms of reducing unemployment and the flow of income into the local economy, the investment of local funds is economical. Frequently, however, school boards look only at per-pupil costs which are usually high for co-op programs in relation to overall per-pupil expenditures. School administrators who wish to obtain local funds to develop new programs must explain the benefits to the community and to students, as well as costs of operation.

State Funds

Reimbursement to local schools varies with popoulation, ability, of the local school to pay, relative costs and the need for the proposed programs. When schools make requests for state funds, the application should clearly indicate that the program serves the needs of individuals in the area, is related to employment opportunities, and provides instruction which is not available through other agencies and services. State boards have many more requests than can be finances with the available funds and therefore assign priorities to programs of greatest value in terms of need. In most states, an application for a cooperative program would be a part of a total proposal for vocational education rather than a separate application. The rate of state reimbursement would be the rate that applies to the total vocational program of that school, except for Part G programs, as explained below.

Federal Funds

Local schools do not receive federal funds directly, only though and as a part of the funds paid by state boards of vocational education. The federal funds are allotted to states on the basis of population and ability to pay for needed vocational education. The Education Amendments of 1968 (P. L. 90-576) authorized Congress to allocate federal funds to the states up to specified amounts. In Part G of the Act, funds were earmarked for cooperative vocational education programs to involve more disadvantaged youth.

Part G Funds

Priority for funding cooperative vocational programs under this Part is given to areas that have high rates of school dropouts and youth unemployment. The state boards of vocational education are responsible for determining which areas in their states will receive funds and the amounts of reimbursement. The funds must be expended for the development of new programs. Other criteria to be met are:

1. Programs must provide on-the-job work experience related to the students' courses of study and chosen career goals
2. The program must serve individuals who desire and need such education in all communities of the state, with priorities given to areas designated above. Students in non-profit private schools must be served in areas where Part G funds are expended.
3. Funds can be used for program operation, ancillary services, to reimburse employers for added training costs or to pay for certain service or unusual costs to students while in co-op training.
4. In-school vocational instruction related to the occupational field and training job must be provided.
5. The work-periods may be on alternate half-days, full days, weeks or other periods of time.
6. Students must be paid regular wages established for the occupational fields and by the employer.
7. Students must be at least 14 years of age.
8. Public and private employers are eligible to participate.
9. The program must be administered by the public schools or a state educational agency under the supervision of the State Board of Vocational Education in accordance with state plan provisions.

Reimbursement of Employer Costs

This reimbursement can be only for training costs which are above the regular costs of orienting a new employee. In smaller communities, some employees may not be able to afford the costs of training students without some assistance. In a large firm, which may agree to train a number of students, the costs of additional personnel whose only responsibility is working with these co-op students, may be reimbursable. Any funds paid to employers for added costs of instruction must be explained in the training agreement and an accurate accounting must be made.

Reimbursement of Student Costs

The ability of the student to pay for tools, uniforms, transportation to and from work, or certain other costs should not prevent him from receiving instruction or from pursuing the occupational goal which is related to his interests and capabilities. By helping the student get started, his future financial independences may be assured, and deprived students are able to enter occupations which require some initial funds to get started. The teacher-coordinator would be responsible for determining the need for financial accounting.

Part B Funds

Traditional or regular cooperative vocational education classes are reimbursable as a part of a school's total vocational education program. The regular cooperative programs are expected to provide vocational education for all individuals in all communities who want and need the instruction and training. There may be special classes or services for disadvantaged or handicapped students, but individual schools must weigh the advantages and disadvantages of segregating groups with special needs or assimilating them into regular classroom groups. The criteria for funding Part B programs are much the same as for Part G programs, except that no priority is given to areas of high drop-out and youth unemployment rates. The state boards of vocational education determine the level of assistance for Part B programs. The funding does not include reimbursement of employers' added training costs or student costs.

Reimbursable Costs

Cooperative vocational program costs which may be reimbursed under Part B and Part G include:

1. Compensation and travel expenses of personnel involved in the instruction and coordination of a cooperative program
2. Equipment, supplies, teaching aids, textbooks, student materials of fire equipment and supplies necessary for conduct of the program.
3. Rental of space in privately owned buildings, if necessary.
4. Compensation and travel of advisory groups, consultants or short-term teachers if deemed appropriate.
5. Supervisory costs -- compensation and travel and clerical assistance.

6. Teacher education and other ancillary services and activities.

7. Unusual costs to students -- transportation, in certain cases.

More specific information on reimbursable costs is available from departments of education and the VOCATIONAL EDUCATION AMENDMENTS OF 1968: REGULATIONS FOR STATE PLAN PROGRAMS.

Funds For Other Work-Related Programs

Other programs involving work experience and having purposes other than learning an occupation and preparation for a career may be funded under Part D (Exemplary Programs) or Part H (Work-Study Programs). Programs in which the primary purpose of the employment experience is to familiarize students with occupations and to broaden their aspirations are funded under Part D. Work-Study Programs, Part H, in the Vocational Education Amendments of 1968, is a provision to employ full-time vocational students who need the earning to commence or continue their vocational education. Students in work-study programs are employed by the school, or some other public agency, and seldom work in jobs that are related to their in-school programs or their career objectives.

VI. THE PREPARATION OF TEACHER-COORDINATORS

The educational value of a cooperative program is dependent upon the effectiveness of the individual who coordinates the instruction and training. In most cases the same individual teaches the related class and is responsible for placement and for coordination of on-the-job training.

Role of the Teacher-Coordinator

Even though a coordinator does not teach the related classroom instruction, he is responsible for directing the total experiences of the students and utilizing the resources of the school to get the necessary related instruction. The teacher-coordinator must have insight into the needs of students and be able to prescribe and direct their program of instruction in school and on the job. The teacher-coordinator must be well informed on manpower needs and be able to enlist the cooperation of employers who can provide appropriate on-the-job training. The enthusiasm and know-how the teacher-coordinator brings to his job keep the students motivated to learn and perform their jobs well, and keep the employers dedicated to the instructional emphasis of the co-op program.

Teacher-Coordinator Competencies

Many of the required qualities of a teacher-coordinator are functions of his personality and physical make-up -- warmth, empathy, judgment, stamina, enthusiasm, resourcefulness and dedication, to mention a few. He must have special competencies for the highly demanding role of teacher-coordinator. Preparation for this role consists of general education, theoretical and technical content, professional training including student-teaching, and occupational experience. Most states describe courses which a teacher-coordinator must complete in order to be certified by a state department of education. Course requirements vary somewhat among states and teacher-education institutions. For the purposes of this guide the following broad competency areas for the preparation of teacher-coordinators are recommended.

OCCUPATIONAL EXPERIENCE: Sufficient employment experience in the world of work to be able to prescribe instruction and to demonstrate proficiency in performance of occupational skills and appropriate work habits. Most states specify from one to three years in paid employment in the occupational field in which the teacher-coordinator will be teaching and coordinating.

GENERAL EDUCATION: Bachelor's degree with emphasis in behavorial sciences, humanities and communications.

TECHNICAL CONTENT: Technology and discipline for the occupational field he is teaching, in the same depth that is required for individuals who are preparing for the occupations.

PROFESSIONAL EDUCATION:

1. Instruction: Ability to plan and conduct instruction with emphasis on individual differences, individualized instruction and application of instructional media

2. Guidance: Ability to perform the teacher-coordinator functions of student recruitment, appraisal, selection, placement and follow-up. Knowledge of theories of career development, occupational choice and people to participate

3. Public and Human Relations: Ability to create good relations with various groups and individuals, to sell the program and to motivate people to participate

4. Management: Ability to organize and develop a plan for a local program and to administer operation of the program

5. Coordination: Capacity to make certain that each set of program activities is properly accomplished, and that the program is functioning properly by following essentials of day-to-day operation

6. Youth Organization Supervision: Ability to advise the vocational youth organization in its activities

7. General School Activities: Ability to manage a classroom, work with the school administration and other faculty members, and contribute to the total educational program of the school

Methods of Preparing Teacher-Coordinators

One of the tenets of vocational education is that individuals "learn by doing", and it is felt to be especially important in the preparation of all vocational education personnel. If the teacher-coordinator's preparation has been entirely didactic, he is inclined to pattern his own teaching in this way. The methods utilized to prepare the teacher cannot be separated from the content or theory to be learned. It is important to give some consideration to ways in which teacher-coordinators acquire necessary competencies.

TECHNICAL COMPETENCIES: The didactic courses in the discipline and theory of an occupational field are necessary, but seldom give a person the technical competencies he must be able to demonstrate in the classroom. The teacher-coordinator must be able to apply the theory to performance in the field for which he is preparing workers -- in several fields for multi-occupations coordinators. The experience should be relatively recent, should include a variety of tasks and duties and exposure to the perspectives of both management and employees. Recency and relevancy may be more important for teacher-coordinators and related vocational teachers than quantitative evaluations of occupation experience. Ideally, the person who is preparing to become a teacher-coordinator or a related subjects teacher should have a supervised co-op occupational experience in addition to experience he received before entering a teacher-education program. The teacher-educator can plan this experience so that the prospective teacher-coordinator learns how co-op training and coordination are performed and what problems students encounter in making a satisfactory adjustment to a job. While he is employed in an occupation, he can make preliminary decisions about the kind of in-school instruction students need for similar jobs. Even though a person may have worked in industry for a number of years, his experience may have been limited to a narrow range of duties and he may have overlooked factors in the work environment which have an important bearing on how students are prepared for work adjustment.

PROFESSIONAL COMPETENCIES: The development of professional competencies can also be planned as a kind of co-op program. Early in the prospective teacher-coordinator's preparation, as he is being introduced to learning psychology, teaching methods and the scope of co-op education, exposure to an operating program and co-op students will make the introduction more meaningful. The exposure should include observation, and possibly some participation in classroom instruction, coordination, youth organization activities, advisory committee meetings, and other duties performed by an experienced teacher.

The guidance functions and the extensive utilization of individualized instruction in co-op programs require an unusual sensitivity to individual needs and behavioral changes. Experience in small-group processes and individual counseling, under supervision are needed by prospective teacher-coordinators.

Student-teaching, as a practice, should be as comprehensive as the job of the teacher-coordinator and allow the prospect to practice in as many of the job duties and functions as possible, including coordination. Student-teaching should be given in a school setting which is similar to that which prospective teacher-coordinators can expect and should be able to work under the supervision of a competent, experienced teacher who is worthy of emulation.

A teacher-coordinator who anticipates working with socio-economic disadvantaged youth should have student-teaching experience with students who are disadvantaged. Obviously, the student-teaching should be in the occupational field in which he will be teaching and at the same educational level -- junior high, secondary, or post-secondary.

If teachers are expected to use new instructional media and methods in their teaching, they must learn to do this in their preparation. The utilization of computerized instruction, video-taping, simulations, projects, and other techniques are best learned through practice. Practice in developing a local plan, writing lesson plans, gathering instructional materials, drawing up a training plan, delivering a public relations talk, demonstrating a skill before a group -- and other experiences which simulate what a teacher-coordinator does -- should be provided in the preparation of teacher-coordinators.

INTERNSHIP: An internship after or as a part of the teacher-education program is needed to determine one's competency and readiness to accept the full responsibility of being a teacher-coordinator. During the internship, the new teacher-coordinator receives help in making a satisfactory and satisfying adjustment to his new responsibilities. Constructive suggestions from an expert or an experienced teacher-coordinator will contribute to his consequent satisfaction.

RELATED SUBJECTS TEACHER: In some co-op programs the students receive related instruction from special subject teachers instead of the coordinator. A supervised cooperative occupational experience should be a part of the preparation of all vocational teachers, particularly the teachers who instruct co-op students.

VII PROGRAM EVALUATION

Accountability and Comparability

The principles of accountability and comparability are being applied to educational programs and schools in an effort to improve the effectiveness and efficiency of the educational system. Accountability refers to a system of evaluation in which the persons who are responsible for the administration of schools or a program are expected to show evidence of the achievement of specified objectives in relation to allocated funds to them. Comparability is a measure of the efficiency of alternative ways of achieving objectives or producing comparable program results in relation to costs. The questions which are being asked about co-op programs include the following:

1. How many students who have received co-op instruction are employed in occupations for which they were trained, or are in related occupations? How long do they remain in their jobs?

2. What are the unemployment rates of students who were in co-op programs compared with the total population in their age group or with students who were in other vocational programs?

3. Are the workers who received co-op instruction satisfacotry to their employers and satisfied with their employment, and how does the adjustment of these workers compare with those who had a different educational background or vocational preparation?

4. What is the school retention rate of co-op students as compared to the rate for students as a whole for the age or grade level at which cooperative training is given?

5. How many students who wanted co-op training and could benefit from it were served? Who were not served and how many were there?

The impetus for these questions and others come from the people in public office who are responsible for the achievement of certain social and economic goals through public education. It was the intent of Congress, when it passed the Vocational Education Amendments of 1968, that the public schools must provide vocational education for more of the population, and particularly for young people who are judged to be disadvantaged and likely to experience difficulty in making the transition from school to work. The outstanding record of co-op education programs in helping youth make a satisfactory transition led Congress to authorize funds to expand and extend co-op programs so that more students could receive this training. Continued financial support will depend on the results that are achieved from the expenditure of funds. Thus, schools and the people who administer co-op programs are held accountable for what happens to students who receive co-op instruction and the extent to which all people, who could benefit from cooperative training, are served.

Specification of Purposes

In order to evaluate a co-op program in terms of effectiveness and efficiency, there must be a clear understanding of the purposes and objectives of the program. If the purposes are to prepare people for occupations, then program evaluation should be a measure of the number of enrollees who entered and performed satisfactorily in occupations. To determine if a program is efficient, the outcomes are compared with alternative methods of preparing people for occupations. Usually, an evaluation of efficiency includes a comparison of costs and answers the question: which method or program yields the best results and at what costs to society and the individual? The emphasis in evaluation should be on program outcomes. However, as costs increase and schools have difficulty in obtaining funds, cost considerations have an effect on the development and maintenance of programs.

Different kinds of co-op programs may have different purposes, such as reducing the drop-out and youth unemployment rates for a particular geographic area, or the purposes may be to improve the work habits and attitudes of youth who need to be employed in order to remain in school. At the post-secondary level, more emphasis is likely to be on helping young people qualify for supervisory postions and advancement in an occupational field. As was suggested in the first pages of this publication, the purposes and objectives of most co-op programs are more encompassing than just satisfying the needs of individuals to be employed. Evaluation may concern itself with such questions as:

1. Are the people who have been enrolled in co-op programs employed in jobs which provide acceptable incomes and a sense of self-fulfillment and offer opportunities for advancement and other rewards that most people want from their work? Are they any better off than individuals who did not receive instruction and training?

2. Do the individuals who have had co-op education participate in civic, social and cultural activites of the community?

3. Are the students who were in co-op programs able to enter and succeed in college and other advanced educational programs?

4. Are the individuals who received co-op instruction able to adjust to job changes brought by technology or changes in the demand for workers in different occupations?

Specific Objectives

In addition to evaluating the extent to which the program achieves its purposes, the teacher-coordinator and the school administrator who are responsible for an individual program should be concerned about intermediate objectives to determine the effective and efficient ways of operating a program. The teacher-coordinator should be concerned about whether or not the methods of instruction used in the classroom result in desired behavioral changes and improved job performance by co-op students. In efforts to reach more students and expand programs, the effectiveness of various methods of attracting students to programs should be evaluated. By clearly specifying what kinds of behavioral changes and intermediate outcomes are expected for the program, specific practices and activities of the teacher-coordinator can be evaluated and different approaches used to achieve objectives when deemed necessary. When the objectives are clearly understood and accepted by all of the parties who have inputs -- employers, students, faculty members, and the teacher-coordinator -- the program is more likely to achieve its purposes.

Sources of Evaluation Data

Cooperative vocational instruction has a built-in advantage over most educational programs because achievement of proficiency can be measured in actual performance on the job and is not limited to pencil and paper tests or simulated demonstrations for skills and knowledge. Another advantage is the participation of the employers and supervisors in evaluation, because of their expertise and ability to judge the satisfactoriness of students in the application of skills, knowledge and attitudes. Productivity, quality of materials produced, work habits, human relations, and other indices of satisfactory performance are more significant than a measure of what students can recall on a test or demonstrate in the school setting.

Employer Evaluations

In addition to indicating what instruction individual students need to perform well on the job, periodic progress reports by the employers and supervisors of students provide a continuous evaluation of the effectiveness of the program. Employers have to know what criteria are to be used in making evaluations and to what standards student performance should be compared. Immediate feedback from the employer allows the teacher-coordinator to make necessary changes before students have left the program. Follow-up employer evaluations of students who have graduated give some indication of longer range outcomes of the training.

Student Evaluations

Job satisfaction of students who were enrolled in a cooperative vocational program is also an indication of program effectiveness. If students received the "right" training for the "right" jobs, their job satisfaction will be greater. Follow-up studies of students' employment history at one, three and five-year intervals are some indication of whether or not a program achieved its purposes.

Teacher-Coordinator Evaluations

The teacher-coordinator of a cooperative program should be making continuous evaluations of the effectiveness of his instruction, coordination, guidance, public relations and other activities in order to make the most efficient use of his time and effort. Management by objectives, as practiced in industry and business should be utilized by teacher-coordinators because of the wide range of possible activities. They can become involved in the rather specific purposes cooperative vocational programs are expected to achieve.

Comparative Studies

It is difficult to make a judgment about the effectiveness of efficiency of a cooperative vocational instruction program without some consideration of how the cooperative method compares with other methods such as full-time in-school instruction or simulated laboratory training having similar objectives. Evaluation procedures listed above may be utilized.

Cost-Benefit Studies

Some schools are evaluating vocational education programs in terms of costs (public and/or individual) and benefits (public and/or individual). Costs would include the prorated salary costs, equipment, space, supplies, administration costs, etc., that are assignable to the program. Costs may also include individual costs if students in the program pay tuition or forego income while they are enrolled.

Public benefits are sometimes measured in terms of the tax revenue that accrues to the government or the length of time it takes for students' taxed income to equal the amount invested in their instruction and training.

Individual benefits may be measured by estimating the additional income students receive over a one to three-year period as a result of the training as compared with the amount received by students without training.

Evaluation and the 1968 Amendments

The Provisions in the 1968 legislation to extend and expand vocational education programs to serve the needs of the disadvantaged and the needs of individuals in areas of high youth unemployment and dropout rates means that states, schools, and vocational education programs will be expected to show evidence that these groups were served and what the outcomes were. Unless it can be shown that cooperative vocational programs served the needs of the disadvantaged as well as the "average and above average-income" group, it is doubtful that any additional funds will be allocated for cooperative programs. Provisions are made in the legislation for reimbursing the costs of evaluations. The purposes for each part of the act are clear and programs will be evaluated in terms of the stated purposes.

VIII EXPANSION AND IMPROVEMENT

The Need to Expand

At no other time have educators been more challenged to deal with socio-economic problems than they are today. Many young people who leave the public schools without preparation for an occupation and a productive life are prime candidates for unemployment and its consequences of deprivation, drug addiction, protest and alienation from sociey. Business and industry cannot assimilate the individuals whom the schools have failed to reach because they are not staffed to teach the social and basic skills that should have been learned in school. Many schools, responding to the values society has placed on college education, have "turned off" boys and girls who want and need a very practical education which helps them to cope with their environment and the challenges of life. While it is true that the public schools have had many excellent vocational education programs, including co-op instruction, youth who could have profited from vocational training were not enrolled. Some were turned away because the programs "selected out" individuals who had poor records of achievement, attendance, and relations with other teachers. Others never applied because vocational education lacked prestige in the eyes of the parents, counselors, academicians and student groups. Thus, large numbers of students who could have benefited from vocational education leave the public schools without preparation for an occupation, many leaving before graduation because the subject matter in school did not seem relevant to their needs and interests.

Cooperative vocational education programs have an outstanding record of reaching some young people who were previously uncommitted to education and learning. When teacher-coordinators and employers took a personal interest in their development, learning took on new meaning for them. They were motivated to study and learn the basic skills and to do better in academic subjects, as well as in vocational classes. Cooperative education is not the solution to all of the problems of youth and education, but its record of successes and its built-in "bridge" between school and work offers the school an unusual opportunity to help students make education more meaningful and relevant to their concerns.

Attracting Students To Programs

The image of cooperative vocational education and the manner in which schools initiate new programs to serve additional students is crucial in the success of these programs. One of the major thrusts of the 1968 legislation is to provide cooperative vocational instruction for the disadvantaged and potential drop-outs, but if a program has an image that is associated with being deprived, retarded in school, underprivileged or alientated from the mainstream of education, who will want to enroll? Community leaders, the top managers in business and industry, the leadership in labor organizations, the school administrators and other educators must openly support programs -- even as members of Congress did in their unanimous vote for the Vocational Education Amendments of 1968. Schools must do more than add new programs; they must make the programs as attractive and desirable to students and parents as it is to prepare for college.

Referral System

Students who have been enrolled in cooperative vocational programs were frequently referred to the programs by counselors, employers, other teachers, or by individuals who had been enrolled. A referral system can be helpful in attracting students to the program because they often act on the advice of someone whom they trust. Many students, particularly those who are disadvantaged in some way, are hesitant to apply for any program which has any selection criteria because of fears of being rejected. Referrals can be facilitated by making personal contacts and providing information to the following groups:

Parents (direct mail, P.T.A. meetings, etc.)
Counselors (faculty meetings, printed information, daily contact)
Labor organizations (meetings, personal contact)
Employment service (personal contact, printed information, cooperation)
Employers (brochures and personal contacts, etc.)
Social agencies (brochures, personal contacts, meetings)

The public employment service and employers talk to many young people who are seeking employment and do not have the necessary qualifications. By referring these individuals to cooperative vocational programs, their needs for both employment and training can be met.

Pre-Cooperative Education

Another challenge in getting new programs off to a good start is providing students with enough orientation to the world of work and occupations so that when they enroll in cooperative programs to which they have given some thought and would like to explore or learn. The interest and motivation of students are greater when they have chosen an occupation to learn, even though their interests may change later. They should be choosing a career or occupational field, rather than a cooperative vocational education program, which is really a method or plan of instruction.

Ideally, the orientation to the work world and exploration of occupational fields should be a continuous part of education, integrated throughout the curriculum from kindergarten through high school. In the absence of this kind of emphasis in the curriculum at the present time, consideration should be given to "career exploration" courses and pre-vocational classes which help students learn about occupations and about themselves in relation to planning satisfying careers and preparing for the future. The students initial exposure to occupations should be to all of the broad fields and, later, exploration in depth of careers which are of interest. The cooperative training will be more beneficial when the student is able to participate in planning the training he needs to achieve his goals.

Training for Additional Occupations

Up until the present time, cooperative vocational instruction had been limited to a few major fields. Under the umbrellas of these major fields, training has been given for a variety of occupations. However, there are many occupational opportunities in which students are interested and for which no instruction or training is available in the public schools at high school or post-secondary levels. The selection of occupations for which instruction is to be offered depends on the interests of students and the available employment opportunities in the community or area which the school serves. For most communities, public services and government agencies at all levels will need many additional workers at the para-professional and aide levels. These occupations are attractive to many young people. The number of people who will be employed in personal and business service occupations is expected to continue to increase, and there are very few programs to prepare people for their growing fields.

Educators who have had experience in working with cooperative instruction face the expansion of programs to prepare people for additional occupational areas. However, they share a common concern for maintaining the quality of related instruction. Schools which plan to add cooperative vocational programs for additional occupations should give careful consideration to the provisions which must be made for related instructtion and the personnel who will implement the programs. Merely releasing students from school to work cannot be considered an educational program. There must be planned in-school related instruction and planned supervised on-the-job training.

Improving Communications With Employers

While the schools have had no difficulty in getting industries to provide training opportunities, there are still many firms and agencies whose top managers and personnel directors are not aware of cooperative vocational programs. Many who are aware of a program, and even some who have employed co-op students, do not understand fully the purposes of cooperative vocational education and need more direction from the schools in how to help students. The school administration could strengthen this relationship by more direct contact with top management and leaders of business and industry. Teacher-coordinators must make regular personal calls on industrial personnel to keep the cooperative programs "on target".

Improving Communication With Labor Groups

Some programs are difficult to get started because labor groups oppose the programs. Their opposition is due to lack of understanding and not having been consulted or involved in planning the programs. It is essential to the success of a program that trained students for jobs in which there are unions to have the union leaders participate in the planning and implementation of cooperative vocational programs.

Improving Communications With Civic Groups

There are many community groups which are concerned with helping youth make the transition from school to adult community life. They are vitally interested in the schools and are influential in getting community support for programs. Communication with these groups should include contacts made by the school administration and by cooperative vocational education personnel.

Flexible Scheduling Patterns

Many more students could enroll in cooperative vocational programs and more employers would be willing to provide on-the-job training if the schedule could be more flexible. The schools which are using flexible scheduling can readily adapt the students schedule to his individual needs, such as attending school on alternate days or reporting to the on-the-job training in the morning and attending school in the afternoon. By extending the length of the school year cooperative instruction may be offered during the summer months, therefore making it possible for students who wish to carry a full academic load during the regular school year also to receive cooperative vocational instruction.

Programs for Rural Schools

Smaller schools have some unique problems in organizing cooperative vocational programs which will serve the diversity of occupational interests found among a small student body. Every effort must be made to get small schools in the same employment community to work together -- shared time, costs, facilities and personnel. A teacher-coordinator may travel to several schools, or a center may be established to which students from schools in an area are transported. These kinds of arrangements are being made in many communities.

IX. A SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

1. Cooperative vocational education must be seen as a part of a total vocational program and as a part of the total education program in a school and community.

2. The purposes and objectives of cooperative vocational programs must be understood and accepted by the schools, the community, students, teachers, employers, labor groups, parents and others who participate in any way.

3. Every effort must be made to attract students who could benefit from cooperative vocational instruction to enroll through changing attitudes toward programs offering instruction for facilitating career planning, and developing referral systems.

4. Cooperative vocational instruction and training should be provided for additional occupations and new careers related to students interests and employment opportunities including government and personal services occupations.

5. A training plan and an occupational related program of in-school instruction for each student should be developed between the student, the teacher-coordinator and the employer.

6. Supervisory personnel for cooperative vocational education should be employed at state and local levels in multi-schools districts to facilitate the development of new programs and to coordinate total cooperative program activities.

7. The preparation of teacher-coordinators should include directed experiences with students utilizing instructional methods and media simulating the duties and functions they will perform as teacher-coordinators.

8. A variety of scheduling patterns should be allowed in order to serve the needs of more students and to provide training for additional occupations.

9. Schools in the same area should work together in program development and preparation to develop consistent practices, and in some cases, to share costs, facilities, and personnel.

10. Employers of cooperative vocational students must be carefully selected to insure the health, safety, and personal and vocational development of students.

11. The cooperative methods should be utilized at both secondary and post-secondary levels and at varying levels of competency.

12. There should be cooperative vocational programs available to students below age 15 to prevent them from dropping out of school. There must be programs which serve the needs of physically and mentally handicapped, socially maladjusted and culturally deprived, which have qualified personnel and supporting services.

13. Career exploration and orientation to the world of work should be provided throughout the curriculum to improve the students' ability to make educational and occupational plans.

14. Related in-school instruction must be planned to serve the special needs of individual students for remedial help, academic instruction, occupational adjustment, and technical skills and knowledge.

15. Provisions must be made for continuous evaluation of programs by students, employers, and teacher coordinators to determine the effectiveness and efficiency of programs in relation to costs and as compared with other programs which have similar objectives.

16. Cooperative vocational education personnel at all levels -- local, state, federal, teacher educators -- must take immediate steps to expand and improve programs as provided in the Vocational Education Amendments of 1968.

X. INSTITUTE EVALUATION

A summary statement of the objective of the insitute appears in an abstract of the proposal as follows: "The purpose is to create awareness concerning new approaches of program implementation to serve urban, suburban, and rural areas at various educational levels and to establish stronger relationships with vocational and with total education." This is elaborated somewhat in the body of the proposal, where mention is made of the need of greater understanding of the American occupational culture, for vocational instruction for every youth at any level, for inclusion of occupational orientation along with other disciplines, for more breadth and greater comprehensiveness of program, for programs so designed as to be responsive to the present-day needs of students for evaluation of ongoing programs and services, and for dissemination of information about successful experience.

Program Design

An unusual and ambitious general plan was devised for this institute whereby an initial conference of a week's duration for presentation and discussion of ten major topics would be followed by a work period of several months in which survey research projects and related activities would be conducted under the leadership of the special consultant for each of the ten topics, after which all participants would come together again to hear and discuss the results.

Plan of Evaluation

Evaluation of the degree to which the Cooperative Vocational Education Institute achieved its purpose involves some subjectivity but can be based, in part, on factual information and, in part, on a systematic consideration of personal impressions of the participants. Three instruments were used: an evaluation form for Institute participants administered at the end of Phase I, a participant reaction form administered at the end of Phase III, and an observer's evaluation form to be used specifically for appraisal of the reports by the ten consultant-leaders at the Phase III meeting. Questions on Phase II were included in the Phase III participants reaction form.

Participants

Indicated in the list of participants are 104 individuals, including 68 persons other than consultant-leaders and City University of New York faculty members who attended the institue during Phase I, and 47 during Phase III. Attendance is described more fully in the following tabulation.

Participant Category	Number of Participants Phase I	 Phase III
Consultant-leader	10	10
CUNY faculty	8	10
Participant in both phases	30	29*
Participant in Phase I only	38	-
Participant in Phase III only	-	18
Total	86	67

*One participant in Phase I served as consultant-leader in Phase III.

In both of the conferences periods, the participants were drawn about equally from state or local education agencies and from university or college faculties. They were well distributed geographically on both occasions, as shown below.

Region	Number of Participants Other than Consultant-leaders and Faculty Phase I	 Phase III
New England	5	2
Mideast	13	13
Southeast	10	7
North Central	17	8
South Central	8	7
West	14	9
Puerto Rico	1	1
Total	68	47

Within each region there was also good distribution, 36 states plus Puerto Rico and the District of Columbia being represented in Phase I and 28 states plus Puerto Rico and the District of Columbia in Phase III.

Participant Impressions

The ten topics presented and discussed in Phase I were rated by the participants, who were asked to indicate which were the three most vital and three least vital topics. The results were as follows:

	Number of choices placing the topic among	
Topic	Three Most Vital-Rank	Three Least Vital-Rank
Co-op Programs	22	12
State Responsibilities	25	12
Teacher Education	40	5
Large & Small Communities	18	29
In-School & On-Job Instr.	13	29
The Needs of People	8	35
Manpower Needs & Opportun.	6	20
Funding Resources	30	6
Working with Employers	11	22
Evaluation	25	6

Several evaluative questions that could be answered by "yes" or "no" were asked after Phase I, to which the participants' responses were as follows:

Question	Number of Responses "Yes"	"No"	No Answer
Consultants were adequately used as resource personnel.	58	4	6
Do you feel that interest-group work sheets were effective in guiding discussions?	60	4	4
Were you given adequate opportunity to contribute in small group discussions?	68	-	-
Do you feel that you have helped provide sufficient direction for continuation into Phase II of the Institute?	50	6	12
Upon completion of Phase II of the Institute, do you plan to be available for participation in Phase III?	56	5	7

Two other questions, relating to specific details and offering three possible choices, are shown below together with the response:

Question	Number of Responses "Too Long"	"Adequate"	"Too Short"
Question-and-answer periods following consultants' presentations were:	1	67	0

	Number of Responses "Too Large"	"Satisfactory"	"Too Small"
Interest-group sizes were:	0	66	0

Some of the general comments made by the Phase I participants in the space provided at the end of the evaluation, grouped under "favorable" and "unfavorable" headings, are quoted below:

Favorable	Unfavorable
"This institute has given me much information and material that I need for preparing teacher-coordinators and developing a conference on co-op for Administrators and Teacher-Coordinators."	"1. The pre-conference information was extremely inadequate. 2. If we plan a vocational conference for T & I call it such and not a conference for all vocational educators on cooperative vocational education."
"General organization of the seminar was a complete success. Some speakers were more challenging than others even though this is inevitable in situations of this kind. In may opinion, Dr. Olivo and Dr. Shostak made the greatest impression on the group. Mr. Nelson's orientation and bulletin were exceedingly important for the effectiveness of the Institute. It would have been important to have Dr. Rowe show the slides and projections he brought with him as well as allowing a little more time for what he had to say."	"I feel that the afternoon summary reports given by group recorders could have been eliminated. These reports could have been given to a selected committee for persons concerned with this phase of the work."
"The two luncheons were excellent mixers. Would have preferred planned evenings at least for two nights which would have given more camaraderie. Of the institutes I have had privilege of attending, this has been the most helpful for the task assigned me by my state."	"Speakers should be given more detailed information about the topic they are assigned. Several speakers did not approach the assigned topic very directly, nor in a way to stimulate related research models."

Favorable	Unfavorable
"I am taking back with me some ideas which should bring about needed changes in our co-op education program at the collegel level."	"As with all national meetings, it is difficult to mesh results and discussions because of the great divergence among the various states' operations under the individual state plans. Also, each service has its own needs and peculiarities which cannot be generalized. Some of the papers have been presented at other meetings. Perhaps this was necessary for transition to Phase II. Certainly Phase III will produce new ideas. Many good ideas were expressed through personal contacts which can be used for improving individual state programs. The contribution that youth clubs can make to co-op programs was not mentioned."

In addition, the participants were asked to describe their recent research activities and current interests. Their replies to these questions were made available to the consultant-leaders for use in developing the Phase II activities.

Follow-Up Inquiry

In December, 1970, a follow-up questionnaire was sent to the persons who had attended Phase I or Phase III of the Institute to determine if their impressions of the conference-seminar activities had changed and to what extent the information presented had been utilized. As of the date of this report, 30 responses have been returned, but three of these provided little or no information. Of the five respondents who said their opinion of the Institute had changed, four explained that their perceptions of its value were enhanced. The fifth was a negative comment reflecting concern for extensive use of "taxpayers' money," for this type of institute. (His response on a previous evaluation form had also been adverse).

Of the 27 usable replies, six were from persons who had attended Phase I only, ten from persons attending Phases I and III, and four from persons attending Phase III only. They were judged on a scale ranging from "strongly favorable" to "strongly critical" on the basis of the general tone of the comments about the values of the presentations on the various topics and on extent of utilization of information provided. The results were as follows:

Judged Category	Number of Respondents Phase I Only	 Phase I & III	 Phase III Only	 All
Strongly favorable	2	14	3	19
Somewhat favorable	1	3	1	5
Mixed	1			1
Somewhat critical	1			1
Strongly critical	1			1
Total	6	17	4	27

The "strongly critical" comment was from the respondent previously mentioned. The generally positive trend may, of course, be partially a matter of response bias, but the written comments were quite convincing in terms of content. Not only had the respondents found the Institute interesting and informative but they gave many specific examples of how they had found it useful. Many mentioned having drawn upon the information presented in teaching and in conferences with colleagues, advisory committees, and other typical situations. Other uses are exemplified by the comments quoted below:

> "Assisted a new school in a small community to set up a program and determine a system of evaluation."
>
> "Proposal to state to institute teacher-coordinator training courses."
>
> "It provided me with a new vocational promotion campaign."
>
> "Ideas expressed at institute incorporated in Evaluative Criteria."
>
> "The institute information was used in rewriting the new (1970-71) Policies and Standards for Secondary Schools on Cooperative Vocational Education for the State of North Carolina."
>
> "Initiated action to produce a handbook for Cooperative Education for Montana."
>
> "Complete reorganization of the co-op business program in Puerto Rico and resource person in the Vocational and Technical Education area for incorporative and coordinative of cooperative programs."

All of the various conference topics were mentioned by participants as having been helpful to them in their work, the number of mentions ranging from six each (30%) for the topics, "Instruction on the Job and In School" and Manpower Needs and Job Opportunities" to thirteen (65%) for "State Responsibilities and Activities." The topics, "Cooperative Programs in Vocational Education," "Teacher Education Programs," and "Resources and Criteria for Funding" were also popular, having eleven mentions (55%) each. The specific examples of how the information presented has been put to practical use were well distributed over the whole set of topics.

APPENDIX

"MEETING VOCATIONAL NEEDS OF YOUTH"- COUNSELOR PERCEPTIONS

It was suggested in an earlier paper delivered to this same group that vocational educators in general and cooperative vocational educators in particular have not moved as quickly as they might in keeping pace with the changing vocational needs of youth. In an historical analysis, it was shown that the need for formal programs of vocational guidance was created by the same influences which gave rise to the need for formal programs of vocational education. Accordingly, counselors must share with vocational educators the responsibility for the apparent lack of progress in our efforts.

It is axiomatic that the effectiveness of any program designed to meet needs is strongly dependent on the degree of understanding of those needs on the part of those responsible for the program. Since vocational needs are the major target of vocational educators, it is generally assumed that they are well understood by this group. Since vocational needs constitute only one ring on the counselor's target, it can be rationalized that they are less well-understood by counselors. Ample evidence of these suspicions is available in the professional literature.

This paper is based on an investigation to identify the perceptions of counselors as they relate to the vocational needs of youth and to determine whether these perceptions vary as a function of selected counselor characteristics. From this it would be apparent whether or not the perceptions tend to be inimical to the optimum operation of vocational education programs and, if so, in what specific ways. This would then provide a logical basis for determining next steps in ameliorating the situation.

Specifically, an instrument was devised consisting of a series of fourteen alternate response items in each of the following need categories: (1) learning about occupations, (2) choosing an occupation, (3) learning an occupation and (4) employment in an occupation. Seven items were also included relevant to such counselor characteristics as experience in counseling, non-educational work experience, socio-economic origin, and level and source of knowledge of vocational education.

The population from which a one and one half percent sample was drawn, consisted of some 9500 counselors who attended the annual national convention of the American Personnel and Guidance Association in New Orleans in March of this year. Counselors sitting in pre-determined seats in two lounge areas were chosen as the subjects. The data were collected on IBM 1230 mark sense answer sheets and processed by computer. The two sets of items relating to characteristics and perception were cross-tabulated.

Description of the Sample

The sample of 135 broke down into 51% females and 49% males which almost exactly approximates the total population 16 years and over in 1970 and represented 38 states. Counseling experience tended to be distributed normally with the average being from five to ten years with 17% having under two years and 19% ten to twenty years. Their socioeconomic origins were determined from the nature of neighborhood they grew up in and the assumption that counselors are generally of middle class origin was confirmed with 60% coming from this class environment with 10% and 30% respectively from the upper and lower classes.

In order to better interpret their perceptions of the vocational needs of youth, data were also obtained to determine their estimate of how well they understood vocational education and the sources of their knowledge about the field. In terms of their understanding, 20% indicated "meager", 55% "adequate" and 25% "extensive". This may or may not surprise you but when related to perceptions some very interesting findings were observed and will be referred to later. Where they learned about vocational education is not only interesting but has significant implication. Four out of ten gained their knowledge from college courses in vocational education specifically and this was supplemented by another 10% who learned about it through other college courses in education. Only three out of 100 indicated talking with vocational educators as the primary source of their information. Five times as many learned by reading about the field on their own. Slightly over one in four learned through direct experience with a vocational program.

While the major purpose of the study was to learn more about counselor perceptions, an item was included as a check of their knowledge of vocational education. They were asked to identify basic program characteristics. Three out of four were able to do this correctly which is encouraging. Further, knowing it does not seem to be a function of their perception of their degree of knowledge of the total field since 78% of those with "meager" knowledge correctly identified it as compared with 65% of those with "extensive" knowledge. This mildly suggests that they may be underestimating their understanding. When viewed from the standpoint of the source of their knowledge of vocational education, the group which learned from direct experience scored lowest in their understanding of the characteristics of cooperative vocational education. This could be a reflection of the relatively small size of this type of program or a lack of communication links between counselors and "co-op" educators as compared with other vocational educators.

One other aspect of counselor characteristics was investigated and that was the amount of paid work experience in occupations other than education. We in vocational education have long held that the academic orientation of counselors is a major reason for failing to understand the world of work and hence vocational education. In this regard the survey revealed that 64% of the counselors had had the equivalent of two years of full-time, non-school experience with one half of these having worked two full years in one job. Only one out of three indicated that their outside work experience involved part-time or summer work only. So much for counselor characteristics; let us now turn our attention to their perceptions of the vocational needs of youth.

Learning about Occupations

When asked how the school might best assist youth in learning about occupations, the modal response was by expecting guidance departments to organize specific programs for the purpose with four out of ten choosing this as the best of five different approaches. Less than one out of ten thought that it should merely be a normal function of counseling and only two out of 100 thought that the school has no responsibility for this function.

In terms of how students could best learn about occupations, the responses were fairly evenly distributed among the alternatives with the exception of using the resources of the local employment office which appealed to less than one percent of the group. The modal response however, was by getting initial help from the counselor.

When asked who has major responsibility for assisting youth in learning about occupations, there appeared little doubt with eight out of ten choosing the counselor over teachers, parents, or employment counselors who shared equally the remaining twenty percent of the responses. Virtually all the counselors felt that youngsters should begin to learn about occupations before the ages six and twelve and the balance choosing between 13 and 15.

Choosing an Occupation

Almost one of every two counselors felt that the average youngster should choose his first occupation at an age earlier than 15. It was suprising to note that despite the widespread influence of Eli Ginsberg, two out of ten felt that this should be done by youths between 10 and 12 years of age.

Almost two out of three of the total group felt that the guidance counselor was the best prepared person to assist a youngster in the choice of his first occupation with parents polling 18%, teachers 10%, and employment service counselors 8% of the vote respectively.

Almost seven out of ten counselors felt that the school has an assisting responsibility in a youngster's choice of his first occupation. Only five in 100 felt that the responsibility to be minor and only one counselor suggested that the school has no such responsibility at all.

Learning an Occupation

All counselors felt that the school has a responsibility for preparing a youngster for his first non-professional occupation. They were quite divided, however, in their feelings as to how this responsibility should be discharged. Nine out of ten were almost equally divided among the alternatives of providing a solid general education (27%), exploratory experiences (34%), and good vocational guidance (31%). A small percentage chose instruction in specific occupational skills and knowledges. One would almost infer that this would appear to support the concept of delaying formal vocational education until the post-school years.

Surprisingly enough, their feelings as to the best place to learn the occupation explodes this inference. Better than nine out of ten felt that the answer was either on-the-job while in high school or in a high school vocational program. Despite the fact that most youths do, in fact, prepare for this first occupation on the job after high school, only 4% of all the counselors felt that this was the best place. The highly vaunted trend toward offering vocational education at the post-secondary level exclusively appears to have effected this group little with only 4% feeling that a vocational school after high school is the best place. And the armed forces are not even an element in their thinking with less than 1% choosing this alternative.

Their feelings regarding the percentage of high school youth who can benefit from vocational education may surprise you. Four out of ten felt that over 70% could so benefit. Almost nine out of ten would place the percentage at greater than 40.

It is of considerable significance that three out of four counselors felt that any type of student could benefit from high school level vocational education. Less than 2% would limit the benefit to the academically untalented. The balance felt that those not going to college could benefit most from our program.

Employment in an Occupation

Better than nine out of ten counselors acknowledge that the school was a responsibility for finding employment for its students with almost half feeling that the responsibility can best be discharged by assisting those who are known to be leaving school. Two out of ten felt that it could best be discharged by assisting youth in making arrangements with the state employment office.

Thus far, the characteristics of the counselor sample have been described and their perceptions identified. At this point the perceptions and characteristics will be viewed to determine the degree and nature of their inter-relationship. Only those perceptions will be noted where a substantial variance from the aggregate response is observed.

Sex Differences

Female counselors appear to have a more realistic view of the age at which the first occupation should be chosen with almost six out of ten feeling it should be under 15. With males, on the other hand, almost seven out of ten felt that the choice should be made beyond age 15.

With respect to the best place for preparing a youngster for his first occupation, over half of the women chose on the job while in high school as compared with only one man in three. Since this is a general description of cooperative programs, this finding appears to be significant.

Female counselors also seem to have a more broad-minded view of the universality of vocational education with better than eight out of ten feeling that any type of student could benefit as compared with only six out of ten males sharing the same feeling. More than twice as many men as women felt that those not going to college were the ones who could benefit.

As compared to the total, the counselor with under two years of counseling was half again as likely to have received all of his non-educational work experience on a part-time or summer basis. The same proportion holds true when compared with each of the other groups with respect to this characteristic.

The same counselor was also twice as likely to have had a father who was in a professional or managerial occupation and have grown up in an upper or middle class neighborhood. He was similarly twice as likely to have indicated his knowledge of vocational education as being meager. With respect to reading about vocational education on his own, the average counselor was more than three times as likely to have done so than he.

This counselor was also much more likely to feel that occupational information should be a product of normal counseling and that learning about occupations should occur between 13 and 15. Paradoxically, he was more than the average to feel that the first occupation should be chosen between the ages 10 and 12.

There appears to be a straight-line relationship between the length of counseling experience and the feeling that vocational education is good for any kind of student. Conversely, as experience increases, the feeling that those not going to college are the best candidates for vocational education decreases.

The earlier finding that the under two year counselor feels his knowledge of vocational education as being meager appears to be confirmed in that he was least likely to correctly identify the characteristics of cooperative vocational education. Again, while the average counselor as compared with those with under two years of experience was four times as likely to feel that the employment should be responsible for placement, the new counselor was two and one half as likely to feel that the school has no responsibility for placement.

Non-educational Work Experience

The counselor with only part-time or summer work experience was only half as likely as the average to feel that his knowledge of vocational education was extensive and one-third as likely to read about vocational education on his own. He was also less likely than those with full-time experience to feel that parents were the best prepared to help youth choose their first occupation.

Socio-economic Level

There appears to be a direct linear relationship between the level of the neighborhood on which the counselor grew up and the feeling that his knowledge of vocational education is "extensive" ranging from eight percent from the upper or upper middle to 35% at the lower middle or lower class level. The counselor from the upper class neighborhood was also one-third as likely to have learned about vocational education from direct experience with the program. He was also considerably less likely to feel that the counselor had major coordinating responsibility for assisting youth in choosing an occupation and twice as likely to feel that the first choice should be made between the ages of 19 and 21. Unaccountably, he was twice as likely to feel that 70-90% of youth could benefit from vocational education.

It also appears that as the socio-economic origin of the counselor gets lower, he is more likely to feel the counselor is the best-prepared person to assist youth in choosing his occupation.

Knowledge of Vocational Education

There appears to be a direct linear relationship between the amount of knowledge about vocational education and its source with 56% of those with college vocational courses as the source feeling their knowledge was "meager" and 37% feeling it was "extensive." The same relationship was observed when the source was their own reading in our field. The reverse was dramatically true with respect to those who received their knowledge from direct experience with program in that only 7% of this group felt their knowledge was "meager" as compared with 50% who felt it was "extensive."

Counselors whose knowledge was felt to be meager were better than twice as likely to feel that the first occupational choice should be made when a person is over 21.

Again, a direct linear relationship may be observed between the degree of felt knowledge and the feeling that the best place to prepare for non-professional occupation is in a high school vocational education program. The same relationship can be seen with respect to percentage of youth who could benefit from our program.

Summary and Conclusions

It is extremely encouraging to note that the average counselor is apparently very close to what we in vocational education would want him to be. He is experienced in his field, has had a substantial amount of experience in the world of work, comes more likely from the lower middle than the upper middle class, feels he has an adequate knowledge of vocational education gained through college courses in the field.

In terms of his perceptions of the vocational needs of youth, he recognizes that guidance departments should organize specific programs to assist youth in learning about occupations and that he should assume the responsibility for seeing that this occurs when a youngster is between the ages of six and twelve.

He further feels that the first choice of occupation should occur prior to age 15 and that he is best prepared to help the youngster make this decision.

While he is somewhat undecided as to precisely how the school should help the youngster learn his first occupations, he feels that this task belongs in the public high school with any type of student being able to benefit from our program. He also feels that we should be serving this need for at least twice as many students as we are currently serving.

Before we take off into an orbit of euphoria, however, we must recall that we have been speaking of the average counselor. And that those with different characteristics from the average tend to perceive the vocational needs of youth in ways that can badly inhibit the best intentioned plans for meeting them.

The most significant variables in this regard were found to be degree and source of knowledge of vocational education. It is probably not surprising that those with inadequate understandings also were those with the most destructive perceptions. It can only be hoped that the lack of understanding was the cause and not the effect. If we are to progress at all toward our goal, it is painfully obvious that we must redouble our efforts to guarantee that all counselors understand our program at least as well as the average counselor. The most effective way of accomplishing this appears to be through involving them directly with our program. We should not diminish our efforts to include them in our college vocational courses and use other organized educational techniques but we must be advised that this appears to be less efficient than actual involvement.

It is nothing short of incredible that only five counselors out of 134 indicated that they learned about our field by talking with vocational educators. What has happened to the concept that the best possible learning (or teaching) situation is a teacher on one side of a log and the student on the other? Is it possible that we exhibit our friendliness with counselors during joint meetings and conferences and conveniently forget that they exist the rest of the time? The implications of this need not be dwelled upon. They speak for themselves.

The study further provided clues for being more effective in our efforts to expand our dialog with counselors. We are reminded that there is a marked difference in the perceptions of male and female counselors with those of the women being much more compatible with our program needs. In our efforts to better educate, forget the usual admonition and "cherchezles homme". (Look for the men!)

Another target group is the new counselor with under two years of experience. He varies markedly in many ways from the more experienced counselor to the degree that it suggests that we may be entering a new era with a new breed of counselors. He acknowledges that this knowledge of our field is meager and tends to prove it by failing to recognize the nature of cooperative vocational education. On the other hand, he is much more likely to have studied college courses in vocational education than any other experience group. The latter is doubly significant when it is considered that the study also shows that interest on the part of counselors is constantly growing for college courses in our field by that they have apparently not been particularly effective in the past. Perhaps vocational teacher educators should adapt selected courses to more nearly meet the needs of counselors or more appropriately design specific new courses and actively recruit students from the counseling field. Inter-departmental discussions with counselor educators at the same college or university in this regard are strongly indicated.

The finding that counselors with higher level socio-economic origins tend to hold perceptions inimical to our program needs is not particularly unnerving because the percentage of this type of counselor at the present time is small. More disquieting is the fact already alluded to that the percentage is apparently growing among the newer counselors which again underlines the need for increased efforts in improving communication with this particular group.

In conclusion, we are all vocational educators, dedicated to the task of improving the ability of the individual to perform the tasks of his occupation more effectively. To accomplish this end we are constantly seeking to improve our methods. Need we be dedicated any less if the target occupation of the moment happens to be "counselor".

DESIGNS FOR COOPERATIVE PROGRAMS AT ALL LEVELS

The main purpose of this section of the National Institute on cooperative education is to generate some guidelines and models for local program operation that would be applicable to various kinds of school and community settings.

A logical approach to this assignment, was to ascertain the patterns of cooperative program development in school districts, and the role of state departments of education across the country. Using Schill's national study of concurrent work-education programs (1966) as a source for making comparisons, an effort was made to determine what important changes in cooperative education had taken place over the past four years. Specifically, we wished to find answers to the following questions:

1. Is the national scope of cooperative education in secondary schools static, in a growth pattern or diminishing?
2. Are there patterns of change discernible from reports or new program development?
3. What is the role of state departments of education with respect to the promotion and supervision of cooperative education?
4. What are some of the factors which appear to inhibt the more widespread employment of cooperative education practices?
5. What specific kinds of cooperative education are presently offered or proposed for the near future in various types of school and community settings?

Surveys

Taking into consideration the limited time and financial resources available for research activities, two questionnaire surveys were distributed. The first of these was mailed to all state departments of education, mainly to determine what kind of supervision was being provided, and what specific kinds of co-op programs were now in process. The second questionnaire, directed to a sampling of school administrators and coordinators across the country, sought to ascertain patterns of local program operation, plans for future development, and what specific conditions are viewed as inhibitors to a more widespread use of cooperative practices.

Responses to the query sent to state departments of education revealed that, with some exceptions, there has apparently been a large expansion in vocational cooperative programs in the last four years. Comparisions with the Schill study show a large overall increase, one which appears to be more than 100%. It should be noted, however, that a lack of consistency and uniformity in reporting one state from another tends to reduce the reliability of these data. Their presentation in tabular form would be incomplete and misleading. Some states reported only those cooperative programs which would be receiving federal funds under Part "G" of the Vocational Education Amendments of 1968; other states included all programs designated as vocational cooperative programs, regardless of specific federal support.

It was discouraging to find some states blaming their lack of cooperative vocational programs on the fact that Part "G" federal funds were not yet available. This kind of reasoning implies that nothing can be accomplished on the local level unless special aid is forthcoming.

New Directions

Among the new cooperative programs reported by state departments, the ones most frequently mentioned were in agriculture, home economics, health occupations, diversified occupations, pre-vocational occupational orientation, and programs for persons with special needs. The state reporting the largest number of cooperative programs was Illinois. In 1966, the Schill study reported 305 programs for Illinois; this year, the number had grown to 849; among new developments were 180 programs for slow learners, serving a total of 3,600 students and 45 cooperative programs in home economics.

Questionnaires directed to a sampling of large and small school districts across the country sought information about the specific nature of vocational cooperative operations in local and area schools, the number of students enrolled in various programs, and what new developments are planned for the future.

Inhibiting Factors

One section of this questionnaire sought to find out what school administrators and co-op coordinators considered to be inhibiting factors to co-op program development. Respondents were asked to identify from a list of 14 items, those which they considered to be major deterrents; they were also asked to select the one most important item from the group.

Deterrents to Co-op Program Development

1. Lack of knowledge and/or commitment by school administrators.
2. Existing programs are too selective.
3. Lack of time in schedule for academic and related subjects and supervised employment training.
4. Job training opportunities are limited.

5. Guidance department does not fully endorse cooperative education.

6. Faculty does not support the concept of cooperative education.

7. Transportation is a problem.

8. Employers would not be fully cooperative.

9. Trade union restrictions would limit job opportunities.

10. School's requirements for graduation do not give academic credit for cooperative education.

11. The state education department does not encourage new or different types of cooperative education.

12. Community interests do not support work-oriented education.

13. The shortage of qualified teacher-coordinators.

14. The lack of adequate state leadership.

15. Other

How did questionnaire respondents choose from this list of deterrents or write in others that they believed to be especially troublesome? Considering the fact that a good number of questionnaires were sent to school administrators, it was surprising to find that the firs item, "lack of knowledge and/or commitment by school administrators," was given as the most serious deterrent. Over half of the 35 respondents, 18, checked this item as a problem and seven named it the most important item on the list.

One might surmise from this response that the school administrators who received our questionnaire did not bother to answer it themselves; probably a good number of them passed the form along to their coordinators of cooperative education. The names and titles of respondents confirms this assumption.

The second and third deterrents to cooperative program development were "transportation problems" and "limited job training opportunities." These were followed by "lack of time in the schedule" and "lack of endorsement by the guidance department."

How Would You Answer?

What I am suggesting here is that the responses to our questionnaire provide some interesting information about how certain people reply to a set of questions. But we need to be careful not to assume that the inhibitors identified by a rather special interest group are in fact the most important things which are preventing cooperative education from taking a much more important role in the educational process. But it would also be interesting to know how persons from other branches of the educational community, or those in business or government, would have responded.

What would the school's director of guidance consider to be the principal deterrent to the widespread growth of vocational cooperative plans? As a person closely associated with student scheduling, he may report that cooperative programs are too selective and too rigid, thus preventing many students at either end of the academic spectrum from finding their way into the program.

If the local business manager had been asked about cooperative education, he might reply by saying "what's that" or, "well, the high school has some kind of program where kinds go out and work in stores, but when I asked about getting somebody to learn how to be a glazer, they said they didn't have that kind of program." Another employer might say, "I tried one of those high school kinds once -- that was enough; he showed up on the job wearing funny clothes and long hair, when I told him to sweep the floor he says that wasn't part of his training outline; that school doesn't learn those people nothin."

A high school principal answering our query about the deterrents to cooperative program development might stress some other problems -- that his students must have so many credits for graduation; that cooperative "work experience," as he is likely to call it, is not the half-time nature of cooperative programs. It prevents many students who want extra-curricular activities or who wish to prepare for college from enrolling. He may also report that the teacher-coordinator wants only those students who have a high level of achievement and ability and a well-defined occupational goal. Here, he might say that the career development value of cooperative programs, especially for the uncommitted general student, is highly desirable, but neither the State Education Department nor the state coordinator's association show any interest in this kind of program; saying it would "lower our standards."

School board members and superintendents of schools have been known to resist the inauguration of cooperative programs out of fear of legal problems. Recognizing that their responsibility for students extends beyond the physical confines of the school building and aware of the mounting cost of litigation, the school's policy makers and their legal advisors are often inclined to look upon any form of school and work program with caution.

Specialized vocational schools and schools with extensive vocational components are not always in favor of cooperative education. Among the responses to our questionnaire to local districts were several from area vocational school administrators; their reaction was mixed. Some area vocational administrators reported that they had built a cooperative component into their program for all students; others seemed to look on cooperative programs as something less than a "regular" vocational program -- a pale imitation, or even a form of competition. Others spoke of the relative difficulties of having programs outside the school, citing problems of transportation, labor union restrictions, extra cost for coordination, and labor law restrictions in hazardous occupations.

I think we can summarize this review of the factors which tend to inhibit the more widespread use of cooperative programs and processes by saying that they are varied and complex, and to a considerable extent, dependent upon the position and frame of reference of the respondent. So when we ask the question, "why has vocational cooperative education failed to penetrate the mainstream of secondary education," there is no simple solution.

Conclusions and Recommendations

Now let us return to some of the other objectives of this survey of cooperative education. What can be said about the national scope of cooperative programs; are there discernible changes of emphasis in new program development; what of the role of state departments of education? When we recall Dr. Olivo's November address before this Institute, in which he said that the real strength of cooperative education lies in its potential to be an integral component in the educational process, what answer do we have for this, or to Olivo's statement that cooperative education has just begun to scratch the surface in serving the human and manpower needs of the nation? Here let me review some conclusions and offer a number of recommendations for co-op programs at all levels.

For the purpose of organization, I have developed three lists of statements. The first is called "Encouraging Signs;" the second, "Negative Conclusions;" and the third is entitled "Guidelines for Local Program Operation." Please understand that some but not all of the comments here presented are derived from our limited survey of state and local cooperative program operation. Also included are some of my own attitudes and opinions that are based on observation and experience, and some subjective value judgments. First, some encouraging signs.

Some Encouraging Signs

1. There is evidence of steady growth and expansion of vocational cooperative programs across the country.

2. New vocational cooperative programs are being introduced especially in the fields of agriculture, home economics, health occupations, and diversified occupations.

3. Groups of students not previously served by selective cooperative programs -- persons with handicaps and other special needs, potential school dropouts, slow learners, out of school youth and adults are beginning to have opportunities for cooperative education.

4. The vocational guidance value of cooperative education is being realized in a few exploratory programs.

5. A growing number of state departments of education are providing supervisory positions in cooperative education.

6. A growing number of area vocational schools, many of which have heretofore considered cooperative education to be a poor substitute for in-school instruction, have begun to build cooperative components into their curriculum plans.

7. A few school districts are developing plans for supervised employment training during summer months in an effort to allow cooperative education opportunities for a broader segment of the school's population.

Negative Conclusions

In spite of the documented fact that the cooperative form of education has been a valuable means of bridging the gap from childhood and school to the adult world, it must be conceded that it still has failed to become an integral part of the educational process. Its typical posture is isolated, specialized, intermittent and sporadic. In many school districts across the country, there is literally no form of cooperative opportunity available; in many other schools, over half of all schools conducting co-op programs, only one kind of cooperative program is offered. The proportion of students enrolled in cooperative actitivities, when compared with the potential number of high school students of working age, is very low, probably less than 1%.

Following are a listing of some of my concerns for cooperative education:

1. Program Orientation

   The strong identification of virtually all vocational cooperative education into discreet and separate programs may be useful for organizational and instructional purposes; unfortunately, such strict adherence to program orientation, rather than people orientation, leaves a pattern of gaps and omissions. The true measure of success of cooperative education is not so much what a program does for a limited number of students as what should be accomplished for all of the people who would profit from such instruction.

2. Limited Enrollments and Limited Scope of Program Offerings

   Many states have reported that their cooperative education programs are limited to one, two, or three areas, such as distributive, industrialm and office practice. The numbers of local programs and enrollments in each are also limited.

3. Lack of Imagination and Variety

   The survey of new and emerging cooperative education activities across the country leaves one with the impression that the greatest majority of them are patterned after existing programs. Only a few responses suggested that the school districts were working wi develop some truly innovative approaches.

4. Dependency on Federal Funding

   A number of state and local responses gave as the prime deterrent to program expansion the fact that Part "G" funds have been slow in coming. If cooperative education is truly one of the most successful forms of vocational education, why must states and school districts wait for earmarked funds? After all, some areas of the country used Smith-Highes funds for co-op program development long before specific monies were available.

5. Lack of Endorsement by Policy Brokers

   Questionnaire responses that identified the failure of school administrators to understand or support cooperative education suggests a corresponding failure on the part of those who would promote the cooperative method. If cooperative education is as truly signigicant an element in the educational process as we say it is, why is that message not being translated in priorities for action at state and local offices? Is the real deterrent here the co-op coordinators penchant for working from the bottom up? How effective have we been in bringing our natural allies in the community, the bankers, merchants, manufacturers, and proprietors of service establishments to exert their influence on the educators? How effective have those who speak for cooperative education in state departments of public instruction been in marshalling the power and policy brokers of school and society?

Guidelines for Program Improvement

After spending so much time discussing what is missing in cooperative education, it is only fair that I make some effort to recommend policies and actions for improvement. These relate mainly to local program operation; but there are implications in them for state education department activities, and to college and university faculty responsibilities.

1. District Coordinator

   In cities, county school districts, and large units, employ a coordinator of cooperative education with administrative rank to oversee all forms of cooperative activities in the district. Under the system of evaluation, insure that the effectiveness of this individual will be measured in terms of people served, rather than the so-called quality of a limited selective program.

2. Top Management and Small Proprietors

Work directly with business and industrial top management to get policy commitments. To line up small proprietors for pledges of continuing participation, communicate with them through their various trade associations and the local chamber of commerce.

3. Board Policy

Seek to obtain a formal board of education policy with respect to cooperative education. Work on the concept that all young people need to have the opportunity for productive payroll employment as an integral part of their curriculum.

4. Summer Months

In rural schools where the opportunities for part-time employment training during the school year are limited, provide for job coordination and related instruction during the summer months. The outstanding success of vocational agriculture is in part a result of summertime teacher activities. Summer coordination is also highly desirable in cities.

5. Shared Time Coordinator

In schools so small that the employment of a teacher-coordinator is not feasible, develop a shared-time plan by which two or more high schools can share one person.

6. Your Friendly Banker

Local bankers, who are especially interested in the health and stability of the business community are likely to be influential supporters of cooperative education. Involve them in program planning and operation.

7. Know the Business Agent

Labor unions, especially in the skilled trades, are moving toward a new emphasis on applicants' qualifications. Vocational schools are now in a position to insure that their graduates obtain job placement, even advanced apprentice standing on the job. Efforts should be made to build a supervised cooperative component into the senior year for vocational high school students, and through relationships with joint labor-management apprenticeship committees, a ready acceptance of probationary apprentice workers while they are still in school.

8. Special Programs or Special People?

As much as possible, the young people in school who are identified for federal reimbursement purposes are being handicapped or having special needs should be incorporated into regular cooperative programs. If the teacher-coordinator truly understands the principles of individualized instruction, he should have little trouble providing for appropriate learning experiences of students with varying interests and skills.

9. Task Force for Cooperative Education

Rather than go about the development of cooperative education on a piecemeal basis, proliferating fragmented efforts, establish state and regional task forces for cooperative education that grow out of state guidelines. Have such task forces include representation of the communities they serve -- business, labor, government, educational management, and employed and unemployed persons -- working together to determine what kinds of cooperative education activities need to be conducted.

TRAINING PLANS FOR COOPERATIVE VOCATIONAL EDUCATION

Let us remember a basic platform which is foundational to this Institute. The Vocational Education Amendments of 1968 -- which from a pragmatic point of view should be identified truly as Voc Ed '70 - (who is capable of understanding the infinite wisdom of Congressional appropriation procedures?) is well within the pattern of the history of Federal-aid-to-education.

The Amendments have a unique element. Most aid-to-education legislation has been elicited by a crisis in manpower. The expansion of the West, with its resultant development of new and widespread manpower requirements created such a crisis, and Congress passed the Morril Act of 1862. In 1917, World War I -- and a great shortage of skilled workers -- brought about the Smith-Hughes Act. We are all familiar with the effects of Sputnik in 1957, in terms of professional scientifc manpower and the resultant NDEA of 1958. The gap that became obvious within a short period of time was filled by the Vocational Education Act of 1963 -- with a thrust towards providing training in major occupational fields -- the 4-1 ratio needs of technicians and semi-skilled professional manpower for the professional engineers and scientists. This training need surfaced on the secondary and post-secondary levels including the adult level. Just as the Panel of Consultants on Vocational Education had a leadership role in preparing guidelines for the Vocational Education Act 1963, the Advisory Council on Vocational Education five years later gave added impetus to some of the priorities that were shunted aside in the earlier study, and gave Congress the parameter needs covered in the Voc. Ed. Amendments of 1968.

The amendments to this act is a refinement directing major innovativeness to include that segment identified as academically and socioeconomically disadvantaged. Legislative recognition has finally been given to an axiom -- the real lesson that has been learned from the dialogue between industry and education. When Congress provides a program for the schools which will supply the employer with the kind of people he needs, the employer will support it both financially and through personal involvement.

The cooperative sections of VEA '68 is just such a vehicle, and in its intent, can refine VEA '63 to relieve, at minimum, the crisis that emerged, namely making vocational meaningful to its product -- a higher degree of relevance to the real world of work. This is its unique characteristic.

The study which is the subject of this section of our institute, however, has a tangential theme to this purpose. It is regretful that there are current undertones of positive criticism. We must add this caution to the plan. To the statement, "the employer will support it both financially and through personal involvement," we must add the dictum, "but do not ask the employer to turn his plant and office into a social service agency or an education institution." Let us not take the concept of John Comenius in his "great Didactic" where he says -- "let us seek and find a method of instruction by which teachers may teach less, but learners may learn more."

A survey letter was sent to each State Director of Vocational Education seeking the following information on training plans: exemplary training plans currently in use together with accompanying directions to local administrators and/or coordinators; criteria serving as determinating factors for the format; any recommendations which could be made towards a universal statewide training plan.

Early responses gave immediate knowledge that our questions were ahead of the implementation of VEA '68 state plans. Of the 53 identified resources, six replied with the direct answer that they had no training plans, sixteen returned sample plans, and the remainder did not respond. Random telephone communication and personal meetings with the majority of this latter group indicated that plans were in the development stade and would be ready for dissemination in time for the academic year 1970-71. Detailed analysis of the material received from the States of Alabama, Alaska, Arkansas, Illinois, Kansas, Kentucky, Maine, Michigan, Minnesota, Mississippi, South Carolina, Tennessee, Vermont, Virginia and Washington, augmented by fourteen local district plans, resulted in a continuum of state directives ranging from clear concise directions to a general directive of self-determined procedures on the district level.

All plans offered state department personnel as resources for local administrators and teacher-coordinators. Six specified state department personnel must be involved and all directed state department approval as a must. All plans called for reporting procedures to the state department. These reports called for the following information: name of the agency, type of business or industry cooperating, name, age and grade level of the student, period of time for the project, and the purpose of the training program. Only one state defined these terms for the local administrator. In assisting the local administrator in the area of definition, the Minnesota State Department served in an exemplary manner in its leadership role.

The training agreement which is signed by the administrator, the teacher-coordinator, the parent, the employer and the student, in most case studies, calls for the following conditions: fair compensation, time of training, framework of the course of study in the school, specifics of on-the-job duties and responsibilities, 15 hours per week during the school year (there are variations on this), school instruction in related technical subjects one period per day (again variations), cooperative effort by both the school and employer, specific direction that the parent is responsible for the student while in training, termination of individual projects in consultation between teacher-coordinator and the employer for due cause or unforeseen business conditions. The training agencies describe training needs and issues progress reports.

A descriptive booklet and/or a meeting of training agencies and school administrators and coordinators is usually the initiating action.

An emergent pattern of a corollary study made in an interview with personnel staff members of three major industrial corporations with national policies providing for participation in cooperative vocational education programs has these characteristics: the program has been in effect for a number of years in various urban company locations. It is viewed by the company as a community involvement -- mutually beneficial. The major problems are the attendance records of the students and, secondly, a lack of sense of responsibility to the job. The company is hopeful that students will become full-time employees upon graduation. The semi-annual program is initiated by the central office of local school administration mailing a form which requests the company to indicate the number of students they are seeking and in which category of occupation. The students selected for participation by the school are then sent to the company and are processed in the normal manner through the employment department, including an interview with the line supervisor. Students are paid an hourly wage -- about $2.25 per hour and are paid for number of hours worked. The students participating are in two groups -- those who divide the school day between on-the-job time and in-school time, and the second group who alternate weeks on-the-job and in school.

The school coordinator and the personnel staff man of the company communicate frequently by telephone but normally meet only at the beginning of the school year. The company representative is not informed of curriculum offerings or sequence relevant to the training program. One personnel man indicated that he had no knowledge of the relevance of the work experience to the classroom study.

The company seeks minimum job entry skill -- that is, a typist should know how to type, but not necessarily at minimum speed requirements. The company does not rotate the students' assignments in the office or plant.

The company retains a high percentage of graduates -- perhaps because of company policy which upgrades participating students immediately upon graduation. It is of interest to note that two companies draw students from two adjoining states.

Comments of importance made by company personnel are:

- Cooperative vocational education cannot be separated from the quality of the education in the local district
- The co-op student should be above average in abilities since he loses classroom time
- Line supervisors look with favor upon the program. There are never enough participating students to meet requests.

- There is an obvious high interest in the on-the-job portion of the program on the part of those students who have a high sense of responsibility.

- Those students who join the company participate to a high degree in the company tuition refund plan for continuing education.

- There is a major difficulty in obtaining change in the curriculum of the cooperating school district -- making it more in line with company manpower needs.

- Secondary level schools in the urban areas of interest are still college oriented. With the advent of open enrollment policies of certain colleges the problem will be compounded.

- Grade thirteen potential dropouts should be considered for co-op vocational programs.

- All personnel men interviewed rejected Federal reimbursement to to the company for its participation in the co-op program.

Constructive criticism only is intended in this of the paper, but it was pointedly stressed last Autumn that cooperative programs face a chasm of communication between industry and education. There is a lack of understanding in both school and business sectors. Conferences with representatives from both sectors in attendance have heard major speeches by industrial leaders emphasizing their desire to work cooperatively with the formal school structures. It is pertinent to quote from an Upjohn Institute report prepared by Sam Burt and Herb Striner where they state:

> The fervor, excitement and enthusiasm of the meeting at which these pledges are made, however, are rarely matched in the meetings of the personnel managers, office managers, plant superintendents, and foremen who must do the hiring, training, upgrading and promoting of the disadvantaged....Even when the social conscience of managers and supervisors matches that of the head of their company, these people cannot suddenly shift gears from managing personnel to one of taking on the unprecedented task....of developing the potential of the persons whom they supervise and direct.

Training plans of necessity originated by educators as a tool for education of the young must include an educational process unto itself. Teacher coordinators must become resource people to industrial mid-management personnel. And going up-stream of this process, teacher-coordinators must be educated themselves. State department personnel would do well to establish pre-service workshops for these coordinators. These workshops should be given over to examination of the patterns of experiences derived at the area-vocational schools, skill centers, opportunity industrialization centers, industry and union-operated programs designed to prepare youth for the world of work. These manpower programs have accumulated a wealth of knowledge in developing new concepts and techniques for training the disadvantaged. Successes and failures of these projects should be made known to the school personnel in order that they may benefit from the experiences of others and be enabled to implement findings in their own programs and services. The cycle of education-training-employment should be interrelated, with the schools assuming more responsibility. Further on in this presentation a framework is offered for implementation to this concept.

A second need for understanding on the part of the teacher-coordinator, certainly in his leadership role, is the better know-how of tomorrow's jobs. Critical planners must tune in with the Federal, state and regional departments of labor and other agencies dealing with population statistics, labor force projections and manpower requirements for use in curriculum and facilities planning. As simple as this sounds, it is recommended to administrators that they ask which training programs offer the promise of employment and which do not. What are the jobs of the future? The relationship between manpower requirement studies of the '70s (most done on the national and inrastate plane) must be localized and applied to regional area needs regardless of state boundaries. State departments of education in their interdepartmental relationships with state departments of labor can serve as a major resource to the local administrators of co-op programs. The State of Minnesota, which has a well-conceived and carefully thought out training plan might do well (if it is not being done informally) to submit locally initiated written plans for co-op projects to the State labor department personnel for evaluation as to the objectives sought. The National Planning Association in its Report No. 67-R-1, "Economic and Demographic Projections for 224 Metropolitan Areas" contains excellent guidelines for use in the fields of agriculture, mining, construction, manufacturing, transportation, communication and public utilities, trade, finance, services and government.

Let us now examine state department resources and attempt to select out examples of specific details that can serve the purposes of this institute. In concentrating on the duties of teacher-coordinators, Minnesota defines the parameters of the role as:

> "The purpose of coordination activities is to promote the progress and the welfare of the learner. Coordination is that activity which combines and adjusts school instruction with the actual on-the-job experience. As a result of the coordination activity of the teacher-coordinator, the student should be motivated to develop good, efficient work habits, work values, and certain life values."

The activities of the coordinator are then described in some detail. However, there is a gap in this checklist. Little direction is given to the psychology of developing a training plan. Since the training plan can be defined as a learning tool, and the pragmatic definition of learning is "change of behavior," we can give credance to the changes that occur to the behavior patterns of the students. This detail is picked up by the State of Tennessee, specifically by Dr. Tucker of the Memphis City Schools. Dr. Tucker's human relations approach, although in a development stage, opens up and avenue for other states to explore.

Reference has already been made to the need for making co-op education programs relevant. Attention is drawn to the State of Washington where the newly recognized category of mid-management is included in their state plan. This is a growing area of industrial manpower need, not confined to the Far West -- but a national need. Mention this area to those oil companies involved in the leasing of gasoline service station and you will strike a major interest.

Attention should also be drawn to a singular directive to be found in the handbook issued to coordinators in the State of Alabama, prepared by the University of Alabama for State Education Department use. The directive advises the teacher-coordinator to adapt the in-school study guide to the training plan. Recognition is given in this concept to the real fact that a local cooperating business in Birmingham undoubtedly trains a student in T. & I. in a different sequence than an equivalent cooperating business in another part of the State.

At the same time, Alabama directs the coordinator to undertake the responsibilities for adult education in the local district. This could be a frightening order when one thinks of the time demands upon the individual coordinator who approaches his job in a thorough manner. It is vital for State departments who have responsibility for co-op vovational education programs to recognize that the U. S. Office of Education and Adult Education within the same Bureau but has divided these responsibilities into separate divisions. State departments could do well to replicate this recognition in their organizations.

The State of Maine emphasizes two factors of interest -- one which we have mentioned previously, namely that the program should be student-oriented. The second spells out what is assumed in many of the other states. Item 24 of their implementing program emphasizes the need for legal compliance with Federal and State labor laws to assure that the plan meets the various regulations. This is a wise precaution for all involved -- the student, the school, the employer and the family. Too frequently the assumption is made that the school is knowledgeable in this area, when in fact, the mere diversity of occupations covered by the program would make it a hardship to do this without benefit of the school legal counsel. This individual should be used as a resource member of the team organized by the coordinator.

Mississippi, in its supporting handbooks for co-op programs has an unusual one for school administrators in T. & I. projects. It contains a check list of characteristics of strong and weak programs. This listing could well apply to almost all co-op programs in all of the categories. It could serve as an excellent guideline for planned and on-going programs. Of equal value, in the handbook for coordinators, there is an excellent check list of criteria for self-evaluation of the co-op program. This is an exemplary measurement device and I commend it to you. I am referring to the Handbook for Coordinators issued by the Curriculum Laboratory, Vocational Education, Mississippi State Department of Education. However, even in this tool there is a gap, one that was present in all other state plans as well. Cannot we assume that there would be value for all concerned if the student himself would evaluate the project with which he is involved? Should we not supply him with a measuring device for his own expression and directive to the improvement of the educational process. In illustration of this need how does one reconcile the diversity of opinions which must evolve from a state directive in their agriculture career co-op program -- "The employer agrees to instruct the student in the ways in which the employer has found desirable" or another state directive -- "The student learner shall obey his superior at all times." I am forced to ask -- is this the educational process that we are seeking? Alaska reviews applications for co-op projects so that priorities may be assigned to local education agencies with high concentrations of youth unemployment and school dropouts. This would then mean that the teacher-coordinators should have good knowledge of the Michigan study which gives early identification to potential dropouts.

Wisconsin, which certainly is one of the states that has been ahead of the nation in programs of co-op nature has localized the total cooperative programs within the state and is treating the entire process as part of the on-going program of high school vocational education. It is cognizant of developing projects on the local level identified as new and unique, since the project plan must be approved by the state to qualify for state and federal funds. Illinois follows the same approach.

Arkansas is currently following the Guidelines for Co-op Vocational Education which were distributed at our first session by Dr. Klaurens.

One cannot speak of any part of vocational education without referring to Ohio State. Byrl Shoemaker, in his leading role in the field, has staffed his department with an unusual group of individuals. Allow me to point to just one of their publications which should be a must for every teacher-coordinator. The Ohio Vocational Education Notebook, known as OVEN lists every single type of vocational education in-school offering in the state. showing for each the vocational objectives, skills, admission guidelines, employment opportunities, resources for use in orientation and counseling and other material. It is certainly an exemplary resource for co-op programs.

A final reference for your attention is to the State of Idaho where an excellent program has been developed for home economics students in cooperation with local business firms towards training in food services and household technology leading not only to restaurant facilities personnel but also to hotel-motel-institutional housekeeping personnel. A unique element of this program is alloting 1/8 of the time allowed to development of understandings in the management of resources, time, energy and money. This is considered as a major goal of the program and must of necessity develop an attitude of respect and dignity for the position and is backed by school effort to train to an awareness of the responsibilities and privileges of employers and employees. It would appear to be an excellent unit of training and could be exemplary to other categories of occupation. It could also serve as a crossover to the previous reference to student evaluation of a project since it offers the opportunity for student development of standards for quality work.

I would, therefore, recommend to you, in summary, the following as a model plan for training under the cooperative education program of the Vocational Education Act of 1968:

I. Preliminary

    A. The identification of manpower needs in the local region and the demographic region

        1. Survey business and trade associations

        2. Request information from State employment services as well as the U. S. Department of Labor

        3. Community surveys

        4. Conferences with the State Vocational Education Department

    B. Identify student needs from local school district central office

        1. Determine segment of student population to be served. Carefully determine post-graduate data.

        2. Survey student interest in program

        3. Plan for required educational requirements in relation to the program

    C. Evaluate feasibility for program operation

        1. Establish availability and interest of cooperating employers

        2. Determine availability and involve school faculty in related technical and academic course offerings

        3. Confer and seek advice of legal counsel on program

        4. Establish instructional teaching aids and equipment needs currently available in the school

        5. Establish criteria for health and safety standards for the program

II. Develop program

    A. Advisory group

        1. Establish a local advisory group involving state department personnel, central administration, regional (demographic) mid-management industrial representatives, student representatives, parental representatives, employment service representatives

        2. Organize a workshop for these individuals to determine program content, evaluation and reporting techniques, corollary course offerings and written statement on purposes of co-op program

    B. Establish panel of instructional staff

        1. Panel members should represent technical and academic teachers, parent reprsentatives, personnel staff members of industry, building administration and vocational guidance teachers

        2. Utilize state department curriculum specialist as resource to this group

        3. Organize a workshop and determine a written evaluation follow-up sequence

    C. Continuous evaluation procedure

        1. Establish evaluation techniques which provide check points for the degree of effectiveness of the training program

        2. Establish personal interview techniques for initiation and follow-up coordination of school and cooperating employer

        3. Plan out a PERT (Program Evaluation and Review Technique) for feedback to instructional staff, advisory committee and reports to state department

III. Written Plan for both school and employer detailing instructional content

1. Utilizing an occupational analysis, determine the skills knowledge, work habits and attitudes required by the occupation

2. Check this listing with advisory group for goals, objectives and time sequence

3. Correlate school offerings with on-the-job training sequence, allowing for flexibility in individual advancement

4. Review goals with interdisciplinary instructional staff and industry representative, maintaining continuous evaluation of each students' progress to stated goals

5. Administer human factors of each project, removing responsibility from the employer

6. Allow for procedural problems where student is terminated by the employer for specific reasons

7. Maintain constant survey avenues of communication for purposes of modification. Utilize all sources of manpower training projects such as area vocational schools, industrial training centers, union training programs, Federal and State departments of Labor projects. Integrate changing manpower and skill-needs requirements into the program as modifications to the PERT plan.

8. Conduct workshops for instructional staff to reflect these modifications

9. Allow for written and student evaluation of the program

IV. A. Report to the profession in published articles

ADDENDUM

AN OUTLINE FOR A LOCAL PLAN FOR VOCATIONAL DISTRIBUTIVE EDUCATION[1]

The Plan is to be a written plan - a cooperatively developed working agreement between the local school corporation and the Vocational Education Division of the State Department of Public Instruction, which when approved becomes a contractual agreement and an instrument for evaluation.

The plan should include:

1. Objectives and purposes of the program.
2. Provisions for supervision and administration of the program. A description of personnel involved, line and staff responsibilities, and provisions for supervision. An organizational chart should be submitted.
3. Duties of teacher-coordinator.
   a. Teaching
      (1) non-vocational
      (2) pre-cooperative
      (3) related instruction
   b. Coordinating
      (1) high school
      (2) adult
4. Provisions for an extended contract for coordinator.
5. Program of instruction.
   a. Plans A, B, or C.
   b. Content of general related instruction.
   c. Provision for individualized instruction.
      1. Job study guides
      2. Manuals
   d. Describe procedure used to assure that the nature and content of instruction is based on occupational needs.
6. Program of on-the-job training.
   a. Describe criteria for selection of training stations.
   b. Describe the recommended employment schedule of trainees.

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[1] Indiana, State Board for Vocational Education, 230 State House, Indianapolis, Indiana.

   c. Describe procedures used to ensure a minimum of fifteen hours per week of supervised employment and on-the-job training during the school year.
   d. Describe procedures used to ensure a well-rounded program of on-the-job training.

7. Enrollment in the program.

   a. Who may enroll
   b. Selection procedures
   c. Pre-requisites

8. Provisions for the local club program.

9. Physical facilities.

   Describe classroom, facilities available, and briefly outline plans for their use.. If now considered inadequate, describe plans for improvement.

10. Provisions for advisory committee, .

    a. How selected, who appoints.
    b. General duties and responsibilities.

11. Provisions for surveys and follow-up studies.

12. The adult program.

    a. Provisions for supervision and coordination.
    b. Types of classes.

13. Procedures for local evaluation.

    a. Classroom instruction.
    b. On-the-job training.

14. Provisions for teacher-coordinator attending State-called workshops.

15. Provisions for reimbursing travel expenses for the coordinator.

    a. In city
    b. Out of town

16. Qualifications of personnel.

    a. Teacher-coordinator
    b. Related classes teacher
    c. Adult and evening school teacher

17. Reports

Describe provisions for periodic statistical and descriptive reports of activities by the coordinator to the administration and the state supervisor of distributive education.

18. Forms

Please submit one copy each of the various forms used by the local school such as application for admittance to program, evaluation forms, training agreements, schedule of training experience, survey forms, etc.

19. Responsibilities

a. Local school
b. Vocational Division of State Department of Public Instruction
c. Distributive Education Division of the University of Minnesota

20. Provisions for reimbursement

Reimbursement by the Vocational Division of the State Department of Public Instruction will be recommended according to a schedule to be agreed on and attached to this plan.

USE OF ADVISORY COMMITTEES IN IDENTIFYING OCCUPATIONS AMENABLE TO COOPERATIVE EDUCATION

Few educational programs give life to the phrase, business and education -- a partnership, as do programs of cooperative education. It is obviously necessary that there be a partnership if the educational value of a cooperative work experience is to be realized. However, the partnership should and can be strengthened through the proper organization, conduct of, and relationships with advisory groups.

Advisory groups should include not only present employers, but prospective employers as well as persons who can be valuable in identifying new employment areas. Advisory groups can help identify job problems and help overcome barriers to cooperative programs. Participation should be solicited from business, commerce, industry and labor as well as various private and public agencies in educational programs. Participating should capitalize on communication, stressing involvement, and should be as much a learning experience for advisory personnel as a resource for educators.

Advisory groups should not be "used," they should be utilized and their efforts recognized. Suggestions should be honored, and if they cannot be implemented, an explanation should be given. Advisory groups should not be asked to perform impossible tasks or to consider unrealistic problems.

The selection of personnel for membership on advisory committees is very important. Representatives from various organizations should be selected who are knowledgeable beyond the requirements for entry jobs included in the cooperative education spectrum. They should know the occupational field and identify career opportunities which follow. They can help by explaining educational requirements and projecting occupational trends. Advisory personnel should have broad concepts and insights and in addition, carry sufficient authority to make decisions and commitments. If one accepts the premise that vocational education starts with a job analysis modified by educational principles and professional organization, then cooperative education which is a form of vocational education takes place on the job site and would seem to mandate cooperation with labor and management.

Despite the emphasis placed on advisory committees, a key person is the director or coordinator of cooperative education programs. He or she is the person who must work with the group and must be able to identify personnel, stimulate their interest, appraise abilities and in general develop a harmonious, productive relationship. Well-chosen, well-organized advisory groups are one of the responsibilities of directors of cooperative education.

Another important aspect of advisory groups is in evaluation of the effects of cooperative education programs. Evaluation should include follow-up after graduation. Evaluation and follow-up should include student choice of further education, employment, career planning and the social and psychological effects of the cooperative work-school experience. Employers' observations should be solicited and evaluated and the cumulative results of evaluation should be weighed in the construction or modification of curriculum patterns both in the occupational and academic components of secondary and post-secondary education. The comment was made in the report of the National Conference on Cooperative Education of February, 1969, that research shows that cooperative vocational education program graduates have the lowest youth unemployment rate in the labor force.

Philip Arnow, in an article entitled, "Bridging the Gap From School to Work," in the December, 1968, issue of the Occupational Outlook Quarterly, discussed the need to explore policies and practices of American employers toward hiring youth. He pointed out that in a cost-conscious economy it is likely that increasing proportions of employers have become accustomed to hiring only employees judged to be mature, experienced and capable of carrying their own weight. Cooperative educational experiences help youth meet all three requirements.

From the general concepts just described, a set of questions and requests for comments were developed. Participants to whom the survey forms were sent were asked to give short simple answers. It was hoped to obtain objective responses by this method.

Survey forms were sent to approximately seventy five advisory groups ranging from the members of the National Advisory Council for Vocational Education to chairmen or secretaries of each state advisory council. The remaining twenty five were sent to a cross section of institute participants.

The following responses represent comments made by responders. Because some comments were made by more than one participant, the number of responses vary. Included are comments which are similar yet seemed to reflect shades of difference. They have been included and the nuances are left to the reader. Responses were received from every section of the country, Puerto Rico and Hawaii, and from rural and urban areas. Many responses will be familiar to directors of cooperative vocational programs. Many offer clues which, hopefully, will be of help in strengthening cooperative and other work-study programs at secondary and post-secondary levels.

List the simple, basic criteria which identify jobs for high school youth in cooperative education programs.

1. Ability of business to train students.
2. Need for trained people in the job area.
3. Must be congruent with labor regulations.
4. Moral climate should be good.
5. Job should provide training, not just work experience.
6. Should provide adequate number of training hours.

7. Should offer opportunities for advancement for students who have capabilities.
8. Availability of training materials.
9. Availability of staff willing to coordinate classroom experiences with increased on-the-job training.
10. On-the-job experience not available in the school curriculum.
11. Need of part-time help.
12. Company willing to pay prevailing wages for job category filled.
13. Job in harmony with child-labor and related laws, especially those on safety.
14. Job has appropriate, continuous supervision.
15. Job should be within reasonable commuting distance.
16. Job should be meaningful and, if possible, related to course of study.
17. Adequate equipment and facilities to practice the occupation he is training for with adequate coordination and supervision at level of training.
18. Jobs using basic communication skills.
19. Jobs offering rotation of responsibilities.
20. Jobs should allow up-rating on the particular job or a transfer of skills to another occupation.
21. Jobs must be available during afternoon and/or early evening.
22. Jobs must be suitable for students 16-18 years of age.
23. Jobs must be located in businesses of good reputation.
24. Viable with growth potential.
25. Flexible -- occupational placement exploration.
26. Sound training capabilities.
27. Students are not placed in positions which require decisions for which they cannot be held legally responsible.
28. Students are not placed in positions which involve them in undue psychological and/or physical strain, situations, etc.
29. Students are not placed until the identified job has been visited by the teacher-coordinator.
30. Varied learning experience.
31. Jobs should develop students integrity and maturity.

List some common objectives to cooperative education programs in business and industry which advisory committees can deal with.

1. There is a tendency to exploit students.
2. Employers don't keep students in work stations which are complementary to the curriculum.
3. Students are involved in hazardous areas without proper pre-training.
4. Not feasible to use a part-time person.
5. Not feasible to offer a variety of experiences.
6. Up-date curriculum.
7. Up-date facilities.
8. Funding of cooperative experience for disadvantaged youth.
9. Wage and hour structures.
10. Industrial codes.
11. Union agreements.

12. Student transportation.
13. Selling the program.
14. Lack of adequate supervision.
15. Exploiting students.
16. Difficulty in selling business on keeping the student on in spite of a slack period.
17. Training Sponsor not capable or willing to analyze student's capabilities, abilities, and attitudes.
18. Unfamiliarity of counselors with industrial opportunity.
19. Unfamiliarity of students with job opportunity.
20. Student must be able to get along with people; take instruction, criticism.
21. Lack of coordination of programs between schools.
22. Reluctance to continually be training workers for job(s).
23. Restrictions on using student-workers in certain peak periods.
24. Necessity to involve school personnel in management decisions.
25. Expensive to train.
26. Too much follow-up of attendance and ratings required.
27. Requirement that student be kept on one job only until he learns it.
28. Requirement for detailed description of job duties and extensive contractual arrangements.
29. Any requirement which excessively interferes with normal handling of employees, e.g., abnormal hours of work, need for special training and counseling.
30. Assignment of students incapable of benefiting from the job opportunity.
31. Lack of adequate coordination.
32. Maintain sensitivity to student's career development.
33. Poor quality of workers.
34. Arrangement of working hours.
35. Lack of continuity.
36. Poor supervision by school.
37. Union objections.
38. May encourage student to drop out and accept employment.
39. A rigid structure of many high schools discourages effective cooperative programs.
40. Employers ask students to work over the maximum number of hours.
41. Most businessmen are not acquainted with the program.
42. In Service Training is needed for students and businesses.
43. Hazardous working conditions.
44. Provide an opportunity for all students - at several levels perform adequate on the job.
45. Adjustment of traditional philosophies.
46. Influence with school boards and employers.
47. Suggest permissive legislation and regulations.
48. Assist in defining manpower needs.
49. Can aid in bringing coordinator and school officials together with employers who have objections to work out problems.
50. Can help locate materials and resource persons pertaining to student attitudes, habits, grooming, etc.
51. Students quitting job after training period.
52. Assist in job placement of trainees.
53. Use wise counseling in order to select trainees for cooperative vocational education.

How can advisory committees help identify jobs amenable to cooperative education in new and emerging industries?

1. Perhaps by constant reading in their field could an advisory committee identify new and emerging industries.
2. By periodically reviewing and surveying needs.
3. Thoroughly acquaint themselves with the program; become knowledgeable.
4. Be constantly on the alert for training opportunities in dealing with others.
5. Communication with coordinator and school officials should be frequent and open.
6. "Talk up" the program wherever possible; clubs, meetings, etc.
7. Know what to tell other interested potential employers -- who to contact at the school for more information, procedures, and benefits.
8. Local Chamber of Commerce contacts.
9. Through local employment agencies (determine need).
10. Through state and world labor conventions.
11. Keep abreast of world events.
12. Findings of other recognized community agencies should be studied and considered by the advisory group.
13. Job list predicting future opportunities should be changed as frequently as necessary, even if it is every six months, to meet the supply and demand.
14. Advisory groups continuously need to consult with industry on the local, state and national levels.
15. They might consider career listings published by U. S. Office of Education and the National Industry Conference Board.
16. By being a gathering center of needs.
17. Know state and federal regulations (ages involved).
18. Have a member of the Department of Employment meet with the advisory committee.
19. Visit management and sell co-op education.
20. Be directly involved in innovative programs as a sponsor of a new type of co-op programs.
21. Introduce the teacher-coordinator to other business men and women in the community with the expertise to accomplish the task.
22. Knowledge of investment trends.
23. Knowledge of market trends.
24. Knowledge of government contracts.
25. Continuous occupational survey on a regulated time basis.
26. Have current and projected data on the nature and numbers of occupation in the geographical area where students expect (and desire) employment.
27. Assuring that the council has broad representation.
28. By holding regular meetings with the expressed purpose of identifying these jobs.
29. Make use of smaller sub-committees.
30. Representatives of unions as well as management can help to initiate cooperative programs where needs of industry require. These advisory committee members can serve to bring the Cooperative Education Bureau and representatives of companies willing to participate in employing and training co-op students together.

31. Make this responsibility SPECIFIC for designated few.
32. Encourage school programs which combine basic English, math, social studies, etc. with job training skills programs (related reading, etc.).
33. Use wide diversity of types of people on committees.
34. Add members to committee from new and emerging industries in the community.
35. Cluster jobs for maximum efficiency in entry preparation.
36. Set up interviews with managers of new and emerging industries.
37. Prepare publicity for appropriate Trade Journals and House Organs regarding the need for jobs.
38. Contacts with personnel office in different industries.
39. Census studies.

How can the composition of advisory committees be improved to assure most effective identification of occupations amenable to cooperative education?

1. Broaden participation to include occupational clusters.
2. Spread out geographically to include all the employment community.
3. Be assured that members understand their duties.
4. Include various levels (people on the actual job, supervisory, and management).
5. Include parents and alumni of program.
6. Stagger terms in office, rotate members, review makeup of committee according to priority of objectives.
7. Include some employees as well as employers.
8. Include representatives of labor and manpower groups.
9. Take cross section of community representatives.
10. Be able to communicate with many types of personalities.
11. Comprised of persons from each segment of a community.
12. Eliminate bias.
13. Dedicated persons.
14. Explain what is needed before entry on to committee.
15. Add persons with hiring capabilities.
16. Add persons with access to media.
17. Rotation of senior students as active members.
18. Establish short term ad hoc committees of a "craft" nature.
19. The coordination phase or function should include visitations for the sole purpose of becoming better acquainted with new and emerging occupations. Therefore, the teacher-coordinator will learn more about the people involved in these occupations and he/she will be in a better position of selecting advisory committee members.
20. Include shop stewards and foremen.
21. Include investment (market) personnel.
22. Include college training personnel.
23. Represent all sizes of business and industry.
24. Be more knowledgeable about cutting bureaucratic red tape.
25. Be able to advise re: other means of funding.
26. Liaison with all interested agencies.
27. Focus on persons interested in cooperative education instead of persons assigned to another committee.

28. Get persons on committees with expertise in occupations being considered.
29. Inform the appointing authority of the council members of the significance of a cooperative education program and encourage the appointment of members who would support such a program.
30. Regular meetings.
31. Recommendations being followed.
32. Careful analysis of duties of Committee when set up.
33. Organized and regularly scheduled meetings, but not just to meet.
34. Shorter term appointments for committee; replace if inactive; rotate for wider background experiences.
35. Some representation from women, who as mothers, establish and develop attitudes (not necessarily PTA or civic leaders).
36. Put one or more former co-op students on committee.
37. Rotate members of committee periodically.
38. Members to become reasonably informed on education objectives and capability of existing education institutions.
39. Coordinate with industry associations and State Employment Service.
40. Assure balance of management and labor representation.
41. Provide for continued rotation of membership.
42. Involve the various professional organizations to participate those which relate to your cluster of occupations.
43. Have representation on regular advisory of new and emerging industries.
44. Have separate Steering Committees for this purpose and thus have the entire committee composed of representatives of new industries.
45. Including representatives of Department of Labor Offices, unions, manufacturers, organizations, community members, employers, workers, etc.

General comments

1. Advisory committees using just the district boundaries cannot effectually determine what new and emerging industries are available. Suburban committees are sometimes isolated from urban areas where emerging industries usually are developed.
2. Advisory committee members should be selected not only for their knowledge and ability in a particular occupation, but also for their knowledge and interest in other areas of industry and business. They should be well known and respected by others in their line of work. They should be interested in vocational education and willing to spend some time promoting it. In short civic minded individuals.
3. Steps need to be taken to relieve program dependence from economic conditions.
4. Cooperative vocational education should help "bridge the gap" for participating students. Local, state, and national advisory committees might be established and coordinated with free enterchange of information. For a specific job cluster, another local advisory committee might be selected to function. Advisory committees along with cooperative coordinators might act as a liaison force to make for a positive attitude toward the world of work between academic personnel of schools.

5. We have 24 lay advisory committees which helps us keep abreast of the technologies. None of the advisory committees are exclusively concerned with the placement of co-op students. We have far more possible job locations than we have students. In our technical/vocational division we have 42 students participating in co-op or intern positions. Average student way is $3.62 per hour. This term we have about 6200 student enrollments and ± 4100 students.
6. One advisory committee cannot provide all the answers needed today in the operation of a dynamic cooperative vocational education program. Most teacher-coordinators will have a permanent type committee plus a number of ad hoc committees which service a specific need -- especially those needs pertaining to curriculum development.
7. It is difficult to visualize now a questionnaire of this nature could be of benefit to those to be served. So much of the success of this type of program depends upon the coordinators skill and dedication and the skill in which the advisory council is managed.
8. While an advisory committee can be of help, my observation is that the real selling and implementing is done by the coordinating teacher on a person-to-person basis. The role of the advisory committee is usually informative and general.
9. Cooperative education is an area in which more emphasis must be placed if we are to prepare many of our students for productive citizenship. It offers probably more training opportunities for the money invested than any other program.
10. I believe that most school people, students and businessmen are very much in favor of co-op programs if they are acquainted with them. The problem is that not enough school people and businesses' are aware of the program and its advantages.
11. Problem has been the non-use of advisory committee members appointed. The school administration is not taking the leadership in using them.
12. All work experience must be provided for the purpose of meeting education objectives. Evaluation of the work experience must indicate its degree of success in meeting the objectives.
13. Research should be done prior to assignments so that some of the flaws may be ironed out. Employers should be consulted when the course of study is being prepared, so that the related work or theory is well correlated with the job experience.
14. Advisory committees should contain Vice Presidents of Personnel Departments in the industry who are really in a position to create jobs within their own companies and in allied companies. Similarly union representatives who can call companies together in a particular industry and set guidelines for employment of student trainees in a uniform manner. This has been done in New York City in several vocational fields recently. The support of advisory committees is essential to the building of goodwill for cooperative education programs throughout the business community.
15. a. That the Advisory Committees be comprised of individuals representing a cross-section of the industries in the area. Unfortunately, some committees have omitted such industries as Agriculture, simply becaue they interpret Agriculture as being

synonymous with farming and do not include the many agri-business and agri-trade occupations.

b. Advisory committees, youth groups and other organization should make a comprehensive survey of the community to locate suitable training stations.

c. The advisory committees, or a committee appointed by the respective Boards of Education should have authority to approve training stations.

16. I have worked with advisory groups for many years and find them invaluable in setting up vocational-technical programs. Since I have had little experience with cooperative programs, my comments may be slanted toward how I used these people. It seems to me that cooperative programs are a way many schools could initiate some exploratory experiences that would broaden a youth, enabling him to make a wiser choice in selecting a vocation.

17. Every occupational cooperating (advisory) committee established by a school should include, as part of its services, a cooperative education program component.

18. In my experience the effective and efficient use of advisory committees at the high school level for occupational programs has been disappointing. They can be, if properly utilized, a very dynamic source of assistance in program development and operation. Unfortunately, in this part of the country there are few secondary school officials that seem to understand the role or importance of advisory committees in occupational programs.

ESTABLISHING RELATIONSHIPS BETWEEN SCHOOLS, COMMUNITY, ORGANIZATIONS, AND INDUSTRY

The following excerpt is from an address by Richard C. Cornuelle, formerly Executive Vice-President, National Association of Manufacturers, presented at the Business Civic Leadership Conference on Employment Problems, June 5, 1967, Chicago, Illinois. This conference was sponsored by the National Citizens' Committee for Community Relations and Community Relations' Service of the U. S. Department of Justice. The excerpts will serve as a base for this report.

> "After a generation of arguing about the consequences and expense of government action on social problems business is beginning to realize that there is much more promise in forgetting the arguments and allying themselves directly to the solution of the problems.
>
> "We have a remarkable unanimity of opinion among our NAM members that the greatest most important piece of business on the agenda of American business today is to find out exactly what its total capabilities to solve community problems are and to get busy on and put them to work.
>
> "Business has always had a sense of social responsibility but what is important is that contemporary business is finding ways to express that responsibility directly rather than by writing checks or supporting secondary social agencies.
>
> "I have never seen anything develop as fast as top executive awareness of the importance of direct industry-social action. We see it in the NAM in less than 2 years' time. The demands for advice far exceed our limited capacity to give advice to companies that want to act."

How can educators responsible for the guidance, training, and motivating of young people take advantage of this new mood of the business and industrial community?

Employers have learned that becoming involved in improving communities and schools gives them a decided advantage in competing for and attracting the kinds of employees they need in order to remain profitable.

When you set out on a program of job development one must ask:

1. Are the programs related to available jobs after graduation? Will the graduate receive the proper supportive effort to help him get a good job?
2. Is the young person being placed in an "instant job" which offers no opportunity for growth and advancement? Too often, he or she has seen this happen in his own family, to a brother or sister,

and is no longer willing to settle for the same arrangement.

3. Are the young people being placed in low-wage jobs that are not related to opportunities for further training and advancement? If they are being put into such jobs, there is little likelihood that they will be stimulated or motivated.

Again, drawing from the aforementioned report, let us look at what business and industry has been doing and are continuing to do, in meeting the challenge of accepting the new employee.

What Business and Industry are Doing With the Community

The programs described at the conference included:

--individual company efforts

--community job programs run by employer councils

-- job programs run jointly by employers and a broad coalition of community groups, including minority representatives

-- employer-community programs which have expanded from job efforts to other employment-related community problems

Companies were urged to review and expand their own efforts, but many believe that really effective job programs must involve employers with other community groups in their basic development and operation.

A tragic lack of communication between business and minority community, business and the schools, business and the tax-supported social agencies was reported from almost every city.

Building a broad-based community organization to tackle job and other basic community problems was seen as the best way to get this necessary communication. This route may take longer than organizing a purely business effort, but experience has shown that it helps avoid many common mistakes, overcomes serious barriers, builds better understanding, and produces more benefits for employer and community.

Business-community organizations which initially were organized to work on employment problems have generally come to realize that they must also become involved with education, housing, health and welfare, transportation, and other problems which affect employment.

Major Components of New Job Programs

Company and community efforts may be roughly separated into three main areas (with some unavoidable overlap):

1. Outreach - New ways to reach, motivate, and bring minorities into jobs and prepare for jobs. Engaging in aggressive recruiting in the ghetto.

While methods of organization and funding differ, successful training programs have these similar characteristics:

1. Employers are deeply involved in development and follow-through
2. A flexible set-up allows needed changes
3. Employers are working with the right "mix" of community groups to assure good communication and coordination of effort

The growing conviction that business must take the initiative to bridge a great communication gap with the schools is reflected in NAM's recent establishment of a special education committee under the leadership of another consultant of this institute.

Job training programs were called only "remedial," "treating the symptom and not the disease," or as one conference participant put it: "It is impractical to allow public schools of this country to produce a product which you cannot use while you are paying for it."

The most frequent complaints voiced at the conference were:

-- Elementary and secondary school graduates do not have basic skills for present and future job needs. (In many cities, high school graduates were termed "sixth grade readers.")

-- Vocational education is still training "buggy whip makers" and similar outmoded skills rather than for industry's increasingly technical needs.

-- School counsellors and other school personnel are often totally uninformed about the actual job opportunities in neighborhood communities. Also, they are frequently prejudiced and hold unfair "stereotypes" about industry or factory type jobs.

Traditionally, business has not been active on local school boards. It was suggested that "companies don't want executives taking strong political positions because it might interfere with public relations."

But this attitude is changing:

"I think we're going to see more businessmen on school boards; we do have accountability in this area, said Randall Klemme, Vice President of Northern Natural Gas Co., of Omaha, who has just become the first businessman on the Omaha School Board.

Some examples of successful cooperation of business and education:

Several years ago, the employment manager of Western Electric Co., Kearny Works, looked at the "general" high school curriculum. He found only one year of science, one year of math, and industrial arts courses featuring "woodworking" and "leathcraft". His investigation led to a program called "Narrowing the Distance."

2. "Fitting the Job to the Man" - New approaches -- totally reversing the traditional concept of "finding the man for the job" -- to seek out and utilize human potential. Innovations include:

-- techniques of selection, interviewing, evaluating potential, and testing

-- restructuring entry-level jobs; better definition of minimal requirements for these jobs

-- upgrading present low-level employees; finding better ways to develop their potential for advancement

-- "human relations" or "sensitivity" training for personnel staff and supervisors to support these new efforts, and help make sure they work

-- administrative measures to assure that new policies are carried out "down the line" from top management throughout the company operations

3. Education and Training - Development of human resources, along with development of materials and products, has been accepted as a basic responsibility of industry by many companies. A major key to successful development has been:

-- "Accentuate the positive"; emphasize possibilities of success throughout the selection and training process. This produces results from people who have lived in an environment of total failure and have often already accepted themselves as failures.

-- Pre-work orientation, counselling, and special kinds of training have been found necessary before job training for many hard-core unemployed. Without this, regular skill-training programs often doesn't work.

-- Basic education (reading, writing and arithmetic) is another widespread need; some employers are providing this themselves, others are cooperating on programs with educational institutions.

-- "High support," counselling, and continued follow-through on the job has been necessary for some of the "disadvantaged: to become good employees. This is being provided by companies and by private agencies.

-- Surprisingly successful skill-training programs are producing excellent employees from so-called "unemployables." Some are conducted by employers on their own, totally in-plant. Others are with Federal On-The Job Training (OJT) or Bureau of Apprenticeship Training (BAT) funds. Some operate through institutional skill centers, supported by business and Government. Still others combine institutional and on-the-job training.

First, principals of six high schools were invited to tour the plant and participate in extensive evaluation sessions, exploring present and future job needs. The immediate payoff: several new courses introduced the following fall in basic technology, applied physics, applied chemistry and a new electronics lab.

Western Electric then set up an 8-week intern program for school guidance counsellors, exposing them to industry at work and needed educational preparation. The company paid them the equivalent of their school salaries. Evaluations of the counsellors (like those of school principals) at the end of the session revealed immense changes in attitudes and concepts about industry job opportunities. Said one:

"I'm still in a state of shock after my visits to the Princeton Research Center and Clark Plant where I viewed new technology and became aware of the tremendous implications that these developments have for the world of work."

One "intern," the head of an industrial arts program at a nearby high school, has started to develop a radically new curriculum for his school, in which an approach to vocational training is incorporated and related to the entire academic program. The school expects to get help from industry through provision of expert speakers and a cooperative work-study program for senior students.

Some questioned whether it was proper for business to "invade" the "ivory tower of educators" or whether it was possible to breach these "impregnable walls" of education. Businessmen who have been actively involved dismissed these fears.

"The whole idea is so simple -- it merely means getting together people who should be talking to each other."

If educators try to defend outmoded systems, it was suggested that a few corporation heads sponsoring a study of local education could provide a most effective means of getting change.

We have seen that business and industry are interested in actively participating in helping new employees learn and adjust to new occupations and in cooperating with the schools and the community.

Let me suggest an approach to vocational education that I believe business and industry would be prepared to accept.

The needs of general education and vocational training cannot be separated in a community and certainly not in urban areas where large numbers of youth go directly from school into the labor market - rather than continue their formal education at the college level. It is vital to integrate vocational education and career training, at all levels, with education in the public schools, so that all persons - regardless of age or sex - are adequately prepared for careers suited to their needs, aptitudes, and interest. Career preparation should occur in three basic settings:

1. in the regular public school system

2. in a Career-Occupational Center

3. in existing programs including on the job training programs

Within each setting, vocational education and training should be tailored to meet the individual's needs. This means that it may range from the teaching of general career-orientations, to highly generalized basic skills, to specific entry skills. The objective of education should be determined by the individual's needs: one person must be prepared for college, another for para-professional service, a third for immediate employment in industry. The placement of an individual in a specific educational program should be determined by his desires and abilities, as ascertained by means of intake counseling. The primary focus of adult education should be the COC; youth education should, of course, continue to take place within the public school system. In order to achieve the highest degree of integration of educational services to young people, there would need to be the closest relationship between the COC and the community agencies to prepare all persons for meaningful and satisfying careers.

The school curriculum must cover some type of career preparation and should be a part of every student's educational experience; this does not mean, however, that the individual should be tailored to meet the needs of the labor market. On the contrary, the objective of vocational education should be the development of the individual - not his channeling into areas of short-run demand in the labor market. Employment preparation and occupational information courses should be given throughout the school program, and at the high school level should provide the core around which the curriculum is built. The specifics of the curriculum should be determined by a committee made up of school (not all vocational people), community and business people. Here are some guidelines that should be followed.

1. Occupational preparation begins at elementary level with a realistic picture of the world of work.

2. Occupational preparation becomes more sophisticated at upper grade levels. The following should be introduced into the curriculum:

    a. Study of the economy -- the production of goods and services, the structure of industry, areas of growth and stagnation, and the range of occupational choices

    b. Initiation of vocational training

3. Vocational preparation should become more specific in high school, built around families of occupations or industries which are undergoing expansion. Entry skills should be taught to those outside college preparatory curriculum. The specificity of the skill training should be determined by the nature of the career, the interests of the student, etc.

4. Vocational testing - the evaluation of interests and aptitudes of the student - should begin in grade school and continue throughout high school

5. College preparatory programs should very definitely be offered to those students interested in pursuing additional formal education as well as those interested in para-professional training. I am not suggesting a division of academic and vocational coursework. This separation, of course, should take place at the skill-training level.

6. Occupational counseling should be regularly available to all students with placement being within the jurisdiction of the co-op coordinator.

7. Job training should be made available to students who desire the experience or who need the financial support. Work-experience programs arranged by the school, should provide on-the-job skill training, preferably in growing sectors of the economy. Work-study programs could be handled in cooperation with existing agencies, such as the State Employment Agency, community agencies, and government sponsored agencies (C.E.P., neighborhood youth corps., etc.). It should be understood that co-op programs are not necessarily an end in themselves. The training should lead to a future career. It must be recognized that many employers are interested in production efficiency and the filling of labor shortages.

8. Training and placement of students in para-professional positions, such as teachers' aides, welfare aides, etc., should be a part of the vocational curriculum and should be considered very carefully in light of all that is happening in the labor market today.

9. Students must be encouraged to finish high school. However, the revision of curriculum as suggested must take place if this guideline is to become more than a cliche. Experiences must be made more meaningful to the career interest of the students.

10. Teaching innovations should be developed that reflect the integration of vocational and general education. Such innovations, should begin at lower grade levels and might include team teaching or problem orientation.

11. Programs designed to enable the former dropout to finish high school should be offered; work-study and work-experience programs should be made available to such persons as necessary, again, under the jurisdiction of the co-op coordinator.

At this point I would like to discuss a summer co-op project that was conducted by a large corporation for 200 high school students from the inner city.

A Sample Program

The purpose of this report is to review all aspects of the Company Earn-and-Learn Summer Program, to cite areas of difficulty as well as success, and to make some recommendations for future programs.

The Company Earn and Learn program was a first, experimental project in which approximately 200 high school students from four inner city high schools were provided eight weeks of employment and educational experience over the summer.

The main objectives were to introduce students to the world of work, to provide them with the opportunity for earning money, to provide certain educational experiences, and to encourage students to complete high school.

A number of innovative techniques were employed. First, the introduction of 200 high school students into the Company complex was, in itself, an innovation. Where previously summer work was performed by college students whose maturity and educational goals permitted normal supervisory practices with the introduction of high school students, special consideration had to be given to the kind of work supervision, to job assignments, and to development of proper attitudes toward work.

A second innovative feature was the use of relatively inexperienced college students as counselors. The purpose of employing these students was to provide peer mediation such that anticipated job problems could be solved as a result of the growth of the students as opposed to simply citing authority as a means of forcing behavioral change.

Third, the educational program was geared to the expressed interests of the students rather than developed in formal remedial reading, math activities. Thus, African History, Afro-American History, consumer and health education and current events were topics employed to develop general reading and discussion skills in the students.

The students were ready for the responsibilities they would assume and the expectations that would be made of them, if they were to enjoy continued employment, by emphasis on how the "trade-offs" implicit in such performance would differ little from the 'games' and 'hustles' with which they were familiar, when viewed in an objective manner, i.e., without the usual, and transparently hypocritical profusions of 'middle class morality'.

Staff Program Organization

The project contained three levels of organization: a senior staff, adult advisors, and counselors. The senior staff consisted of a project director, an administrative assistant, a curriculum director and an assistant curriculum director. Three adult advisors were hired. The chief functions of these advisors were to provide close support to help counsel students and to provide inputs to the two-hour counseling session.

Students entering the program were organized into 12 counseling groups of approximately 18 students each. Each group was led by a counselor - in most cases a college student in his freshman or sophmore year. At each job site (3 sites in all) an adult advisor supervised the activities of the counselors.

This organization permitted counselors to engage in two types of activity: mediating between interns and supervisors with the aim of eliminating conflicts, and, conducting counseling sessions in which topics related to work as well as current events, sex education and consumer education were discussed. In this program organization, the adult advisors were able to provide mature judgment and wider experience as the counselors felt they needed this kind of back-up.

Schedule

Because of anticipated problems associated with students working at bargaining unit jobs, the schedule consisted of 28 hours of work per week and 12 hours of counseling and educational activities. Each day, Monday through Thursday, the students worked 6 hours per day and attended the counseling session 2 hours. On Friday, the students worked 4 hours, with 4 hours devoted to a speakers' program discussed below.

The daily schedule for counselors included three hours in the morning from 8 - 11:00 A.M. devoted to administrative details such as checking attendance, filling out incident or dropout reports, collecting time cards and visiting supervisors in reference to student work problems or other job-related matters. One hour before lunch and one hour after lunch, the adult advisors helped counselors prepare their daily discussion plan.

This preparation included reading necessary books and articles on the discussion topic, writing up discussion notes, and presentation of the discussion plan in role-playing sessions. The last two hours of the day were spent in leading the counseling session. The counselors schedule also included riding the busses which took the students to and from the three locations.

The Work Program

Jobs assigned to students ranged from simple, repetitive tasks such as filing and window washing to such complex operations as correcting drawings done by regular draftsmen.

While the program experienced a number of initial difficulties due in part to the nature of the jobs, in part to the relatively high caliber of the students, and in part to the newness of supervising high school students, by the end of the program students views as reflected in questionnaires, showed that the vast majority were satisfied with their jobs and felt them to be meaningful. This was especially true in those jobs where some training -- even if minimal -- was required. Again, an index of program success was the fact that 90% of the students requested part-time and co-op work during the school term.

Job Selection

Two general criteria were originally set out for jobs selected for the program: (1) that the jobs be meaningful, i.e. a normal part of the production process, and that they not be menial. It was felt that jobs that were menial would be perceived as degrading by the students. Jobs especially created for this program would also be viewed in this light.

The task of finding 200 jobs is a difficult one and it was to be expected that many adjustments would have to be made once the program began. Despite the job selection criteria, some jobs turned out to be menial or did not have enough continuity from task to task. These jobs appeared to be "make-work". To solve these problems, jobs were changed during the second and third weeks of the program. The new jobs in general were of a higher caliber and required more effort on the part of the students. Without doubt, these job changes were of great importance in the success of the program.

Pay Scales

Guidelines developed when it was suggested that a scale of $1.80 per hour be employed by all participating business organizations. These guidelines were not strictly followed by all of the city's organizations, and it became apparent during the second week of the program that $2.00 per hour was a more appropriate pay schedule. Consequently, during the fourth week of the program, a raise of $.20 per hour was announced. This change in pay rate had a remarkably solutary effect upon the morale of some students.

A second feature of the pay schedule which caused some initial dissatisfaction was that some students found themselves performing the same tasks as regular employees whose rate of pay was considerably higher. Such jobs were changed both because they tended to be menial deadend work and because there was no way to make up the inequity between rates for regular employees and rates for interns.

The Interns

Students entering the Company Program were recruited from four high schools in the inner city. The target was 200 students; 230 were recruited in anticipation of a 15% dropout rate for medical reasons, conflict with family plans or the seminar and selection of other jobs during the period between June 21st, when school let out for the summer and July 8th, when the program began. The anticipated dropout rate before the program was actually far too high. There were no dropouts for medical reasons, a finding of some surprise to the medical team giving physicals who expected a number of more or less endemic disabilities including hernia, severe caries and other medical indices of poverty. Similarly, students far from taking other employment during the two-week hiatus between the end of the school term and the beginning of the program, reported turning down jobs in order to join our program. Without doubt, this attitude is in part at least due to the excellent community relations enjoyed by the company.

Selective Criteria

In developing the program design, Company personnel set out the selection criteria for students entering the program. These criteria stated that 50% of the recruits would be 16 and entering the 10th grade, since this group has been identified as being most likely to drop out of school. Twenty-five percent (25%) would be taken from those students who were at grade level and entering the 11th grade; and twenty-five percent (25%) would be taken from those students who were at grade level and entering the 12th grade. It was felt that these two categories would lend continuity to the program since many 11th graders could be expected to return to the Program in 1969, and at least some 12th graders would seek employment after graduation in 1969.

Procedure

Obviously, the relation of age to grade level offers only one drop-out factor. Other such factors would include number of elementary schools attended, number of years family was on relief, reading and math scores as measured by achievement tests, IQ scores, number of children in the family, family income, and so on. Since the performance period allotted precluded a search of school records for this information, guidance counselors in the schools participating in the program were asked to select students in the categories and numbers outlined above in "Selection Criteria" in terms of those drop-out factors. Probably because of time limitations, many of the students enrolled in the program were not dropout prone. In fact, a large minority indicated a desire to not only complete high school, but to go on to college. A majority -- and among that are students who met the criteria -- made known such desires by the end of the program -- a fact we, hopefully, attribute to the program itself.

Recruitment - Procedure

There were three procedures which had to be followed by each student entering the program: obtaining a work permit (for students under 18), obtaining social security numbers for those students who did not have them, and passing a medical examination.

Job Assignments

Jobs were assigned to students by the simple procedure of placing a name next to a job. Under these circumstances, little could be done in the way of matching school training or students special interests to jobs. Students were asked to indicate clerical courses and mechanical drawing courses they had taken. Next, an attempt was made to place these students in the indicated jobs. However, this was successful for only a limited number of interns since jobs involving typing, filing, and other clerical tasks were limited, as was the case with jobs employing mechanical drawing skills.

As has been pointed out, jobs were changed during the second and third weeks of the program. During this time, special efforts were made to place students on jobs commensurate with their background and interests. The procedure employed was as follows: questionnaires asking students to rate their present job as to meaningfulness and to indicate work preferences were distributed. Based upon this questionnaire, efforts were made to find new jobs through the detached personnel departments. This activity was highly successful, especially at Webster where the largest number of job changes were made. As a result of these changes, students formerly relegated to such menial tasks as pulling weeds, washing walls, and mopping floors -- all jobs whose dimensions were well known to the students -- were given a much broader prospective to what might be available to them if they completed their education and acquired the requisite job skills. In this respect, the job changes were in accord with the program goal of introducing students to the industrial process.

The Educational Program

The educational program was developed for a population whose motivation, interest, and educational skills were assumed to be quite low. In order to interest such students in educational activities and to motivate them to continue their formal education, two experimental concepts were employed in the educational program design. The first concept, which relates to topics and materials selected, concern using the felt needs of students as motivation to read (rather than a curriculum which may be foreign to students' special interests and use of college students -- in effect, peers -- as counselors and group discussion leaders). In this case, it was clear from initial contact with students that there was wide interest in such topics as Afro-American history, African history, and current events. Based upon this initial contact, the following general topics were selected, materials purchased, and lesson plans developed:

1. African History

2. Afro-American History

3. Current Events

4. Consumer Education

5. Health Education

6. Job-Related Information

The Friday Speakers' Program

Because the four hours on Friday was a "given", Friday's session was extraordinarily long. It was decided to develop a program which would present dynamic speakers known by the students and able to present issues of the day.

The objectives of each Friday's speaker was to:

1. Draw elements of the preceding four daily group discussions together into a pattern.
2. Prepare for the next week's daily group discussion session
3. Relate the discussions occurring during the group discussion sessions to the "real world".
4. Provide evidence to the interns that "things are changing".
5. Draw all the interns together to discuss a common idea.

The interns were most pleased with the speakers program and consider it the best element of the summer program. This is reasonable since the speakers were exciting and tended to reinforce the group sessions, which counselors reported as being best on the following Monday.

The success of these innovations is indicated by the fact that 75% of the students stated they would like to participate in such a program again next summer.

Other indices of success of any program are drop-out rates and absenteeism.

Because of the age and inexperience of the students, it was anticipated that a relatively high absentee rate would be recorded. However, the actual rate was 5.7% -- which was much lower than expected. The drop-out rate was 7.8% which also compares quite favorably with expectations. Of the 15 students separated from the program, 9 quit and 6 were fired.

Finally, in response to a questionnaire, 90% of the students involved in the program requested part-time or co-op work during the school term. Taking these factors into consideration, it seems evident that two major objectives of the program were met. These were that the program successfully introduced students to the world of work, and provided successful summer employment. A third objective -- completion of high school -- will have to be evaluated in follow-up studies. Based upon this summer's experience, the Company can look forward to even better programs in the future involving needy high school students.

Summary:

In organizing a cooperative effort among school, industry and the community, consider the following:

Evaluation of potential funding sources for a program; consideration of funding constraints; establishment of communications with funding sources.

Analysis of the manpower and training needs of the community.

Definition of curricular and educational methods to meet the defined manpower and training needs.

Establishment of community relations channels and programs.

Development of a detailed play for curriculum, services, staffing and educational and operational systems for the proposed program.

The co-op coordinator is in the most unique position to carry out a unified effort of meaningful employment for young people. He is familiar with the educational system, the business community and the community at large. With proper support, from an imaginative administration, the coordinator should be the pivot point for all vocational, occupational and career planning. In the final analysis, his past experiences of working with business and industry, community organizations and job placement for the students are the very ingredients that are needed for bringing young people up to their fullest potential in the world of work.

Resources

Report, June 5-7, 1967, Chicago, Ill.
The National Citizens Committee for Community Relations Service
Washington, D. C. 20530

New Careers Perspectives
National Institute for New Careers University Research Corp.
4301 Connecticut Avenue, N.W.
Washington, D. C. 20008

Employment Testing Guide Signs, Not Stop Signs
U. S. Commission on Civil Rights
Washington, D. C. 20425

Developing Human Resources
The U. S. Atomic Energy Commission
Division of Labor Relations
Washington, D. C. 20545

Training of Technology / A Demonstration Manpower Development Project
The U. S. Atomic Energy Commission
Division of Labor Relations
Washington, D. C. 20545

Final Report of the YMCA Youth and Work Project, 1962-1966
U. S. Office of Manpower, Automation, and Training
Department of Labor Under Terms of Contract 24-64

STATE ACTIVITIES AND RESPONSIBILITIES

Prior to discussing the responsibility of states and activities of individual states for cooperative education, it may be best to look at the state's role for education in general. Whether we like it or not, whether we agree or disagree, general or comprehensive education is separate and distinct from vocational education. Whether vocational educators have participated in this segregation or have been victimized by it is not under consideration at this time. The salient point is to have entire state departments of education recognize that there is a world of work for which all students are being prepared.

It may be or may not be new to your state or area of responsibility but, in many instances, the world of work is a total education process which is never thought of by most educators. In addition, the idea that there is a world of work for the students is of little consequence to the school and the academicians who continue the traditional program. Many others feel that the practical aspects of a student's education is the responsibility of the school. Still others feel completely helpless about the situation and feel that there is little that the school can do about this phase of the total education process. It is said that there are more important things to do in school than prepare for work.

Much of the rationale behind these statements, attitudes, and feelings is unfounded and untrue. However, it is true that schools are producing large numbers of dropouts, most of whom may be identified at a very early age. Further, it is true that large numbers of graduates of the high schools are unemployed and it should be noted, parenthetically, that very few of these graduates are co-op students. It is true that there is little exposure and education for the world of work in the elementary school curriculum. It is also true that taxpayers are spending four times as much money for remedial training as is being spent to prevent the necessity of remediation programs.

Since the specific responsibility for vocational education in the state education departments rests with the people in the vocational education division, it is our prime responsibility to improve relationships with their colleagues, particularly in the areas of elementary education, secondary education, guidance research, special education planning and all other areas which have an impact on vocational education. The state education department must accept the idea that the world of work is not a small and special appendage to the last half of the secondary school curriculum, but it is an integral part of every child's total school career. We cannot accept the fact that there are two separate school systems operating competitive programs, one academic and one vocational.

The state education department has an organization that should be involved in the realistic assessment of pupil needs. This involves not only academic preparation but also preparation for participation in our industrial, commercial, and technological aspects of our economy.

After the needs are assessed, all agencies must work cooperatively in developing the means of meeting these needs. The state department must also develop means of promoting the idea that work attitudes and habits are valuable to every pupil. Educational planners must also make certain that they are building flexibility into the curriculum so that pupils may effectively move in or out of either academic or vocational training. No pupil's plans are permanent; and during the adolescent years, interests vary and needs change. Schools must recognize these psychological facts of life and urge students to make changes accordingly.

Certainly a program as was outlined will result in quality education for all students.

There are times when the educators indicate that they have problems of motivation and relevancy. Certainly, if there is cooperation between general education and vocational education, many of the problems may find solutions in the area of practical education. The necessity for learning theory becomes more meaningful. Education for employment establishes the relevancy between schools and industry.

In listing those activities and responsibilities which the state education must assume in promoting cooperative education, the following should be emphasized:

1. State Education Departments should provide information to schools, business, industry, and labor organizations and availability of programs to meet student and employer needs.

2. State Education Departments should actively enlist the cooperation of other agencies such as the State Department of Labor, rehabilitation departments, unions, and associations of employers.

3. State Education Departments must develop communications within the divisions of their own departments in terms of course approval, certification and planning and budgeting.

4. State Education Departments should provide assistance in assessing and meeting student needs.

5. State Education Departments should provide local districts with clear and precise materials to gain state approval for co-op programs. These may include sample training agreements, course outlines, etc.

6. State Education Departments should liberalize certification standards to insure a supply of trained coordinators in many different areas.

7. State Education Departments should develop in-service programs for coordinators which are geographically accessible in all areas of the state.

8. State Education Departments should provide leadership in establishing better understanding and communication among the various co-op programs and their coordinators.

9. State Education Departments should encourage innovation and experimentation particularly in the areas of co-op education for the handicapped, disadvantaged, and special programs for state institutions and private schools.

10. State Education Departments should provide the leadership in developing a program for working with organized labor.

11. State Education Departments should protect the interests of the employers through standardizing criteria for student screening and making certain that the legalities of employment are not in conflict with the mandates of co-op programs.

12. State Education Departments should act as a clear house for information on state and federal labor laws.

13. State Education Departments should make certain that co-op programs are not in conflict with each other and do not precipitate child labor violations.

14. State Education Departments should assist in developing meaningful class activities and not be concerned with the placement of pupils in industry.

15. State Education Departments should meet the challenge of competing agencies by maintaining quality programs of cooperative education.

16. State Education Departments should insist that follow-up programs of graduates are incorporated into every program approval.

17. State Education Departments must certainly provide financial support for co-op programs.

18. State Education Departments should develop periodic evaluations programs with recommendations and follow up of these recommendations.

In a questionnaire sent to all state directors of vocational education concerning various aspects of vocational education, there were a number of replies which shed much light on various aspects. The questions and some of the answers are as follows:

I. How does the State department identify student needs for planning co-op offerings?

   a. local counseling service
   b. monthly reports from the field
   c. follow up studies
   d. annual evaluations
   e. vocational interest surveys
   f. student financial needs
   g. employer demands
   h. vocational objectives of students

II. How does State develop co-ops to meet needs of students?

   a. program planning and project review recommendations
   b. business-industry liasion consultant
   c. incentives to vocational programs with co-op components
   d. availability of training stations
   e. balance between in-school and co-op programs
   f. developed locally

III. How does State promote cooperative education?

   a. state leadership in addressing trade and civic groups
   b. state supervisor sooely for co-op
   c. mailings to school administration
   d. institutes
   e. co-op developed out of each vocational discipline
   f. sponsor local development

IV. How does State supervise cooperative education?

   a. work stations visited and evaluated periodically by state
   b. quarterly reports to state
   c. in service institutes gives feeling of what is being done
   d. hours of work and quality of opportunity on training agreement
   e. develop leadership in local coordinator

V. How are co-ops kept up to date?

   a. emphasis on disadvantaged and handicapped
   b. work with juvenile delinquency agencies
   c. teacher education institute
   d. increase graduates from university in co-op
   e. recruit special needs students into regular co-ops
   f. follow up studies
   g. local advisory committee recommendations
   h. changes of employment of students in hazardous occupations
   i. guidelines for reimbursement changed
   j. parallel in school program developed in case of layoff
   k. state plan mandate

VI. What services provide to local districts?

   a. brochures and bulletins issued on developments
   b. labor department brought into teacher conferences
   c. state acts as consultant
   d. in service training and seminars
   e. state provides local geographical area supervisors
   f. transportation of students furnished

VII. What services are provided to assist in development of related class?

   a. state and local supervisors jointly develop curriculum
   b. related class text used statewide
   c. related class workshop
   d. developed by teacher training institutions
   e. resource center service provided
   f. state prepared curriculum guides
   g. local district develops own

VIII. How does state encourage and protect employers?

   a. businessmen included in conferences, discussions, advisory committees
   b. employers trained to accept co-op
   c. thorough discussion of training agreement
   d. state provides assurances to employers that standards are adhere
   e. information from state legislature is monitored and distributed
   f. assurances to employers that they are joint partners in educating better employees

THE STATUS AND FUTURE OF CERTIFICATION IN COOPERATIVE VOCATIONAL EDUCATION

Certification criteria and standards have been for a long time, very perplexing and persistent porblems in all of education. At the present time, when local and state leaders are thinking of expanding cooperative vocational education, it is particularly important to examine the status of certification in this field and to reflect on possible needed change.

Many educators believe the success of a cooperative program is determined largely by the capability of the teacher-coordinator. Therefore, one hears of the concern expressed by state leadership personnel for the quality of teacher-coordinators being certificated. Consequently, it behooves all of us to search for realistic and adequate certification criteria to help promote excellence in the performance of teacher-coordinators who will staff all cooperative programs of the nation.

Procedures

With great expectations for new discoveries, this writer launched a collection of current certification requirements in cooperative education. After determining that state directors of vocational education were the best source for the certification information, the most diplomatic methodology for securing the data was selected. In view of the fact that state directors are constantly bombarded wtth survey questionnaires and since it was anticipated that a great variety of certification requirements would be found, the idea of questionnaire development and usage was dropped. It was then decided that documents on certification requirements would be requested. Consequently, a letter was sent to the director of vocational education for each state, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. Certification information was requested from all vocational services for both levels (high school and post-high school) of cooperative vocational programs for regular students and students with special needs.

The state directors were very cooperative and interested in helping with the study. At the time of this writing, the information has been obtained from 47 of these administrators. While being extremely pleased with the response and cooperation of the state directors, the writer became horrified by his inability to quickly interpret, analyze and reduce the certification information to a meaningful summary.

For this preliminary report, it becomes necessary to warn the reader that the analysis of requirements for each state must be subjected to a review and correction by representatives of the states before a completely accurate national summary may be completed. The state directors will be sent the analysis and summary and their assistance with corrections will be requested before the final report is released.

Summaries of certification requirements for each type of secondary cooperative vocational education program will be given in the next section of this paper. Information obtained was inadequate to allow a summary of post-secondary requirements.

Status of Certification Requirements

When one summarizes information, it is an attempt to adequately represent the material in a brief and simplified form. However, in this instance, the reader should be warned that the effort to summarize may have resulted in oversimplification of the unique differences which exist. To illustrate this point, as in the case of "educational preparation", the regulations may specify the bachelor's degree but, also, cite certain conditions or alternatives as the following from New Jersey's standards for cooperative office education certification:

> A bachelor's degree based upon a four-year curriculum in an accredited college and successful completion of either A or B or C or D below:
>
> A. State approved programs
> B. NCATE approved programs
> C. Out-of-state certification and teaching experience
> D. A program of college studies which includes -- (the document specifies the minimum general, professional and teaching area courses in approximately three pages of detail).

The occupational experience and educational requirements for teacher-coordinator certification in eight types of cooperative programs has been described in the following:

Agricultural Occupations

The advent of interest in off-farm and agriculturally related occupations has moved leaders to cooperative education in efforts to meet the needs for offerings other than production agricultural education.

Ten states provided certification information specifically for cooperative agricultural education.

Occupational experience. Three states specified two years of agriculture experience, one specified three years, one required one year and four indicated no experience requirement. One state specified approved wage-earning experience and alluded to possible competency examinations.

Educational preparation. Eight states required a baccaluareate degree in an approved college or university, one did not specifically require the degree but the other state made the degree nearly inevitable through 90 semester hours of course requirements.

Professional education courses. In the 10 states, this criterion varied from 29 semester hours to no particular number of hours being specified in three. The information from three states cited student teaching as a specific requirement. Two states required courses in cooperative education coordination.

Technical content courses. Except for three states no particular courses were specified other than those technical courses required for the bachelor's degree. One state specified 46 semester hours of technical agriculture and 21 semester hours of science other than technical agriculture. The other two states specified 40 and 16 semester hours respectively.

Distributive Occupations

The materials received from 37 states contained information relative to certification requirements in distributive education.

Occupational experience. Where specified the occupational experience requirement ranged from one to two years with various exceptions such as supervised work experience of one quarter or more satisfying this criterion. Ten states required one and one-half years, one required six years with two years above the learner level and one each specified -- "adequate experience", "competency exams", "experience in one or more occupations". Of those specifying one year, three states would accept 3,000 hours of part-time employment, and three would accept supervised occupational experience from a cooperative teacher education program in lieu of the regular employment requirement. Incidentally, one of those 10 states also specified that the candidate's last occupational experience should occur within three years of the time of employment as a teacher-coordinator.

Educational preparation. Twenty-three of the states specified the bachelor's degree and five inferred this requirement by indicating that a valid regular teaching credential was required. The number of credits in professional and technical courses required by a majority of the remaining eight states tended to indicate that a bachelor's degree or nearly the equivalent was required. One state implied that the master's degree was required. Consequently, the baccalaureate seems to be the minimum acceptable standard in distributive education.

Professional education courses. The professional education course requirements were difficult to summarize because these varied from statements indicating two courses in certain areas to 30 semester hours of specific courses. The materials provided by 22 states, however, specified professional education courses.

Technical content courses. The certification requirements obtained from 22 states specified technical content courses were required.

Miscellaneous requirements. Various miscellaneous requirements were specified such as: valid regular teaching credential - 11 states; complete required courses for certification - 5 states; training must be completed in an approved teacher education institution - 5 states; the major must be in distributive education - 2 states.

Health Occupations

Six states provided certification information for cooperative education in this area.

Occupational experience. For this requirement, five states made reference to the amount of experience after licensure in the occupation. Four of the states required three years experience and one required two years. One state specified approved wage-earning experience and all alluded to a competency examination. One state will reduce the experience requirement from 3 years to 1 year of recent experience if the person holds a baccalaureat degree.

Educational preparation. A high school diploma was specified by four states and a certificate or diploma from a two-year post-secondary institution was the minimum indicated by one state. One state specified 90 semester hours of preparation and provided several standards for this education.

Professional education courses. Two of the states specified 18 semester hours of professional education and indicated this requirement may be completed within five years after employment as a teacher-coordinator. In addition to the general professional courses to become a teacher, one state required only the courses specified for a general education teacher. Another state required two courses in coordination of cooperative education. The sixth state specified no professional courses.

Miscellaneous requirements. Two states specified general background courses of 12 and 18 semester hours respectively. One state specified that the candidates must have approved training for the vocational-technical subject to be taught and another state specified that the candidate must be familiar with the functions and interrelationship of all health services or agencies. One state specified three years of teaching experience.

Home Economics

Information on home economics certification, specifically, was received from state directors of eight states. Cooperative education in wage-earning home economics is a new and emerging offering in several states. Unfortunately, the information on home economics certification in four states had no specific reference to cooperative education.

One must assume, then, that some states are operating under general cooperative vocational education requirements as discussed later in this paper or that the requirements are the same as for in-school programs of home economics with the addition of, perhaps, some occupational experience being a desirable standard. This experience requirement was mentioned slightly in two of the standards received.

Occupational experience. Four states made special provisions for the certification of teacher-coordinators. Each of these states specified occupational experience; two required one year of occupational experience one state required two years and another required approved wage-earning experience.

Educational preparation. A baccalaureate degree was required in three of the states and the other one specified 90 semester hours.

Professional preparation. Special course work in cooperative education and coordination was required by three of the four states.

Miscellaneous requirements. One of the four also required one year of teaching experience and another required three years of teaching on a vocational credential.

Office Occupations

Twenty-nine states provided certification information for cooperative office education.

Occupational experience. Twenty-four states indicated occupational experience requirements; 12 specified one year, eight specified two years, one state specified one and one-half years of experience and another required three years. In the situation requiring three years, one year less may be considered for those persons with the baccalaureate degree. Two states required approved occupational experience.

Educational preparation. Twenty-one states studied, specified the bachelor's degree as a requirement for certification. However, this requirement was inferred for three more states requiring a valid regular teaching credential as a prerequisite to these vocational certification requirements. One state specified 90 semester hours and another state required a master's degree. Three states did not clearly specify their educational preparation requirement but the minimum appeared to be less than the bachelor's degree.

Professional education courses. The professional education requirements varied from six to 34 semester hours. Eighteen states included such specifications in their statements. Five specified courses in coordination of cooperative education.

Technical content courses. Ten states had statements relative to technical content courses.

Miscellaneous requirements. Nine states specified a requirement of from one to three years of teaching experience. One required three years, six required two years, and two required one year of experience.

Trade and Industrial Occupations

Information on T. & I. cooperative programs (frequently known as cooperative industrial education, diversified cooperative training or education, diversified occupations and industrial cooperative training) was received from 28 states.

Occupational experience. Information from the state directors indicated that six states required three years of occupational experience, 11 states required two years and five states required one year. One state required an occupational competency examination, one required occupational competency and one required appropriate occupational experience or two years of teaching experience. Four states did not clearly specify this requirement.

Educational preparation. Certification information from 20 states specified a bachelor's degree and four others inferred this requirement by specifying that a valid regular teaching credential was required. Four states appeared to require less than the bachelor's degree.

Professional education courses. The professional education requirements specified by 24 states ranged from a one-week pre-service workshop to 18 semester hours.

Technical content courses. Only two states specified a certain number of hours in particular technical content courses. However, it was obvious that such courses would be required in all states requiring the baccalaureate. It should be mentioned that T. & I. is less specific in those requirements, perhaps, because of the multitude of different occupations and trades represented in a typical cooperative program. Teacher-coordinators, because of the necessity of individualized instruction, serve more as instructional facilitators than as traditional teachers.

Miscellaneous requirements. In addition to the criteria previously cited, the information analyzed provided several miscellaneous requirements such as: a valid regular teaching credential was required in seven states; teaching experience was required in six states, in-service courses were required in three states; occupational competency exams were required in four states; and a certificate to teach shop and related subjects was required in four states.

Programs for Youth With Special Needs

The information from several states known to have cooperative programs for youth with special needs, did not mention these special programs. Since the information from these states seemed quite complete otherwise, it is possible that certification requirements were covered under emergency or experimental program provisions of the state plans; hence, no formal statements were released with the materials obtained. Otherwise, it is assumed teacher-coordinators of programs for youth with special needs must meet the same requirements as similar personnel of the respective service area cooperative programs.

Information from seven states provided standards for this area.

Occupational experience. The occupational experience requirement for these teacher-coordinators varied from eight years to evidence of occupational competency as follows: one state - eight years; three states - two years; two states - one year; and one state - evidence of competency.

Educational preparation. The bachelor's degree was a requirement in five of the states and one specified the major should be in the behavioral sciences preferably. A high school diploma, with appropriate successful occupational experience and personal qualities were assumed to be the requirements specified by the other two states.

Professional education courses. Two of the states prescribed cooperative education and coordination techniques courses. Two others specified special workshops and two states indicated no particular professional requirements.

Cooperative Vocational Education

The materials obtained from five states indicated they operate cooperative vocational education or general cooperative vocational education or similar offerings, implying that all vocational services and occupations may be represented in one program.

Occupational experience. Three states specified two years of occupational experience. One state indicated one year of experience in two or more occupations and another required experience in two or more occupations but had no time specification.

Educational preparation. Four of the states specified the baccalaureate degree and the same was inferred by another state requiring a valid teaching credential which it issued.

Professional education. Three of the states required professional vocational education in coordination of cooperative education and other courses before or within one to three years after employment as a teacher-coordinator.

Technical content courses. Only one state's materials mentioned specifically 18 semester hours of technical area course work being required and this work may be completed in any of the vocational service areas including vocational guidance and counseling.

Summary of Findings

While the certification requirements tended to vary considerably from state to state, there were common threads of basic requirements. As one examined these basic standards, the following tended to be the picture for all cooperative vocational education at the secondary level:

Education - bachelor's degree

Occupational experience - two years

Professional courses - one or two courses in cooperative education (coordination and public relations) in addition to the professional courses normally required of teachers

Technical courses - appropriate major in the baccalaureate

Conclusions

Based upon the results of the survey of the certification requirements, with consideration for the limitations discussed previously, the following conclusions were developed:

1. The basic educational and experience requirements for certification of teacher-coordinators of cooperative education from state to state and among the various services in secondary vocational education were similar.

2. The occupational experience requirement for new and emerging programs tended to be different from those programs (C.O.E., D.E. and T. & I.) which had been established longer.

3. The occupational experience requirement was not mentioned in the certification standards for some states and programs.

4. The specification of performance criteria instead of time (years of occupational experience) was evident in the certification standards of a few states.

5. Special professional education courses for teacher-coordinators of cooperative programs were cited in the certification standards of several states.

Recommendations

Some opinions of the writer will be given at this juncture. These will be supported by the information obtained from the survey and the experience of the writer as a teacher-coordinator, teacher-educator of cooperative education personnel and as a researcher concerned with studying the functions and performances of cooperative education personnel to project and develop model curricula for the preparation of teacher-coordinators.

1. A better examination of performance criteria as compared with time criteria is needed. The years of occupational experience, as widely known, mean nothing if each week and year is a repetition of the same few tasks.

2. More consideration should be given the supervised occupational experience requirement that presently exists in the teacher education institutions of some states. The nature and extent of this experience may be controlled to provide the candidate with an education to attain either the general or vocational objective values required.

3. The proper values of occupational experience need to be examined. Is general education desired, i.e., knowledge of the world of work and what it is like to earn a living in an occupation or is there another objective such as mastery of the skills of an occupation to prepare to teach it?

4. Some measurement of one's potential for becoming a teacher-coordinator must be developed. The proper criteria are needed for selection of personnel who, with the proper guidance and a minimum of training, will become fully qualified teacher-coordinators.

5. An internship after or as a part of the training is needed to determine one's competency and readiness to accept the full responsibility of being a teacher-coordinator.

6. More study of certification requirements is needed to find those criteria which really make a difference. For example, we have no evidence to support the bachelor's degree as a standard but most every state requires it.

7. There must be more agreement among the states on the particulars of certification standards to make reciprocal arrangements on credentials possible, as presently exists for elementary education, in a majority of the states.

Closing Remarks - A Challenge

The writer has purposely elaborated on recommendations. You may or may not wish to agree, this is your prerogative. How do you stand in this very important area of teacher-coordinatior certification? Are you happy with the standards that exist currently? What changes would you make? What support do you have for the standards you desire? Are you willing to accept the challenge of change which may come from the findings of research?

EVALUATION MODELS FOR COOPERATIVE PROGRAMS

Introduction to the Topic

The topic is not a new one, therefore much of the content of this paper will not be new. An attempt has been made to peruse the literature regarding evaluation, to examine research studies and papers pertaining to evaluation in vocational education generally, and to evaluation in particular. It was evident that much of the thinking already done in vocational evaluation was applicable to cooperative vocational programs as well. In approaching this subject, the author discussed the topic with many people, and utilized their thinking in the content of this paper.

State and national vocational education agencies are concerned with identifying and implementing evaluation systems which will evaluate program effectiveness and efficiency. They are especially concerned with the relationship of program costs in terms of educational benefits derived.

The major purpose of evaluation in all educational programs has, in the past, focused upon ultimate improvement of the total instructional program. Methods used in evaluation have been designed to measure the organizational structure and the processes used rather than viewing the end result or program outcomes. Several other researchers have expressed concern for this pattern of evaluation. It is agreed that evaluation of processes does have a legitimate function. However, one has to assume that the process is based on standards that are proven through research and, furthermore, that the outcomes of programs being "good or bad," directly reflect upon whether the processes include certain programs characteristics. I have not found any such proven standards. It is, therefore, an insecure basis to use as justification for program expenditures and, more specifically, a poor rationale for resource requests.

The complex idea that a cooperative program must have certain characteristics such as training agreements, training plans, a definite amount of release time for the student or the coordinator, and other program characteristics identified with the cooperative method of instruction is not a valid one. The reason being that none of these characteristics can be proven as having a definite effect on the program outcomes or student success when applied to purposes of cooperative vocational programs. Dr. Moss takes into consideration the total worker and recognizes that only one part of his preparation for the world of work is that of tools needed to perform a particular task and also takes into consideration the fact that because the young worker may be employed does not necessarily mean that the educational program has done its job. A complete evaluation system for cooperative education, then, should be applicable to not only all types and all levels of cooperative occupational instruction, but also should take into consideration the total worker needs so that, as previously noted, he makes a satisfactory contribution and adjustment to the world of work and not just a job. It would seem an impossibility to attempt to handle this kind of assignment in this paper and in the short time provided by this research project, however, it is highly recommended that resources and attention be given in the near future to a comprehensive project dealing with such an evaluation system.

In this analysis, a concentration on a process or design that will give direction to evaluation of one aspect of the cooperative program coupled with suggested guidelines to use in collection of data for this evaluation system would prove most effective.

Rationale for Measuring Program Outcomes

A mistake often made by those in the position to evaluate any program is to measure unlike programs or to mix "apples and oranges." Again, it is reminded that one should look at program purposes or program objectives. Basically, then, it seems obvious that if purposes or objectives are different, one cannot expect the same outcome. As Dr. Jerome Moss, Jr. states in his paper entitled, "The Development of a Stated Operated Evaluation Systems," "The comparison of effectiveness and efficiency of vocational programs is meaningful only when the programs being compared are substitutable."

Dr. Moss uses as his example the comparison of preparatory training and programs that are provided for updating people in occupational areas. It is observed that the purposes are different and, therefore, it is of no use to know that one is more effective than another if both are essential. "Similarly, programs designed to prepare machinists are not competitive with (or substitutable for) programs designed to prepare bakers."[1] There is no educationally useful purpose in comparing the two programs. Dr. Moss further states that vocational programs which enroll widely different student groups are difficult to compare fairly. For example, assuring that the concern is for disadvantaged and cooperative programs for this group of people, the characteristics that categorize them as being disadvantaged may be used for classification purposes in identifying cooperative programs,

> "We can then determine empirically, through our evaluative efforts, whether or not disadvantaged students require different kinds of programs than other students for maximum effectiveness."[2]

Therefore, cooperative programs classified as designed for the disadvantaged may still acquire different kinds of characteristics, but could be compared with each other for the reason that their objectives or purposes are the same.

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[1] Ibid.

[2] Ibid.

Figure 2, below, suggests this comparison in designing an evaluation model for a regular cooperative program in a specialized vocational area. Being that the purposes, outcomes, or objectives are the same, one could, then, legitimately compare a day trade program confined to the school campus with an on-the-job cooperative program, an apprenticeship program, or another kind of work experience program.

FIGURE 2

Kinds of Programs to be Compared with Each Other

Student Characteristics	Preparatory/Retraining Programs	
	Occupation A	Occupation B
Socio-Econ. Disadvantaged	Day trade; cooperative; evening, part-time; on-the-job (formal and informal); apprenticeship, etc.	

The Cost-Benefit Approach

If one were to apply a common practice utilized by business and industry to measure the value of a particular program, it would be based on an economic approach. The program would be "price out." In other words, the question is, what are the benefits or profits gained from such a program in terms of the cost of the program?

H. A. Niskanen suggests that cost-benefit and cost effectiveness studies are distinguished by their output measure. He defines benefits as being measurable in monetary or market value which accrues at the margin of output, and effectiveness as an output which cannot be evaluated in monetary or market value units; therfore, he recognizes that a cost-benefit approach might provide input into program evaluation. We too would recognize and remind vocational educators that in viewing the rationale for cooperative program purposes or objectives, include a breadth of learning that transcends that which can be measured by a cost-benefit approach.

Accepting this limitation, then, an examination of attempts as a cost-push design are necessary. The Florida State Department of Education conducted pursuant to a grant from the Division of the Florida State Department of Education a cost effectiveness approach to vocational-technical education programs. I would suggest you examine this study in terms of their quantitative approach to this kind of an analysis.

Bruce Davie designed the benefit-cost ratio as the ratio of the present value of future benefits to the present value of future costs. From the definition, the decision rules are obvious: (1) if the benefit-cost ratio for the program is less than one, the program should not be considered (with the exception of a program in which the intangible objectives cannot be adequately weighed in monetary terms); and (2) when comparing alternative programs, the higher ratio is associated with the more desirable program. Davie's complete formula and justification are listed in the Florida State Study; though it does warrant examination, due to time and space, it will not be included in this paper.

Another approach to the cost-benefit question that might provide input to the thinking of the design of such a program is provided in an article by Mr. Jerry Bryan in the American Vocational Journal, January, 1970. Mr. Bryan compared the total investment of federal funds to the cooperative distributive education program in the State of Arizona with the generated tax revenues to students employed in such programs.

A Model for Evaluation of Cooperative Programs

On the basis of what has been said on this point, let me suggest a matrix model that may be used to compare substitutable programs and provide cells that may be filled with input data from local programs or from a statewide program to be used in the evaluation of the particular program. Different specialized areas in vocational education are evaluated within themselves and are compared only with substitutable programs where the desired outcomes are the same. For example, in cooperative office education, the evaluator would not compare programs designed for the disadvantaged utilizing the cooperative method with programs designed for the disadvantaged using the day trade approach. Being that the desired outcomes for the programs of cooperative office education and vocational office block are identical, a comparison, in terms of program outcomes, would be logical and legitimate.

It becomes obvious that it is objectives or purposes of the program that will dictate the evaluation design. This model would allow the evaluator or the researcher to include in the cells data such as costs for salaries of teacher-coordinators, equipment costs, costs of time required on the part of faculty and staff, and any other costs that are attributed directly to that particular program. If employability is one of the desired outcomes, then this would be an input for use in evaluation along with other outcomes that are identified as the program is planned and designed.

Sources of Data for the Model

As suggested earlier in this paper, the kind of data needed for the cells in the model must be based on purposes or program objectives which were initially established. Once these are identified, the evaluator knows the kind of input that is needed and the outcomes which are expected.

It has already been suggested that in costing out the co-op program in a specialized area there are some measurable expenses that can be quantified. These might include equipment costs, building costs, teacher costs, and time costs.

Follow-up studies of students who have participated in the different substitutable programs may provide usable data. One caution that must be recognized in the use of follow-up studies is the interpretation of the collected data. If a follow-up study is done more than a year following the experience in the program, it becomes difficult to control the factors affecting employees' behavior and decifer the ultimate effect the school program may have had on the employment record of an individual and ascertain the number of other factors influencing the practices of the employee. Therefore, data banks providing follow-up information on students over a period of many years may provide descriptive data that is usable; however, the use of this data after several years have past may be questionable and invalid as far as program effectiveness is concerned.

There are other sources that might be examined, such as self-evaluation by the students, utilization of people from business and industry who are experts in a specialized area, and information that may be provided through Manpower Agencies who can project manpower needs.

Summary

The development of programs of cooperative vocational-technical education must be based upon the needs of the different occupational interest areas to be served in a given community rather than upon the money available for new programs. In the past, it was apparent that program development has been affected by special funding available than by the needs of people. Therefore, an evaluation system should be designed to measure effectiveness of the co-op program in preparing a young worker who will fit into the society of work. The model system of evaluation should be able to measure the effectiveness of a cooperative program of any size, in any specialized area, and in any state or community.

For a mathematical design approaching the cost-benefits aspect, I would refer to the Cost Effectiveness Study done by the Florida State Department of Education. However, I would re-emphasize that much of the outcomes of cooperative vocational programs cannot be quantified and yet is a very important benefit to the student.

Recommendations

1. Further research is needed in the area of evaluation where emphasis can be placed on depth. In-depth research could be by states where certain kinds of programs are more prevalent than in other states.

2. More detailed behavioral objectives should be developed for each kind of cooperative vocational program or a program designed with the same desirable outcomes. This will provide a standardized basis for evaluation.

3. A cost-benefit approach seems to be a bit premature when we cannot at this time adequately measure the social benefits from such a program and, therefore, identify the social costs to such a program.

4. If follow-up data is to be used in the evaluation process of comparing programs in cooperative education, then, not only should it be complete but utilized no later than one year upon completion of the program. It can then be assumed that the behavior of the young worker was affected, at least somewhat by the program.

5. A data bank is still an adequate idea since "follow-up" information can be utilized for research studies of various kinds, also having implications for evaluation. The data should be collected in such a way that it can be computerized and should be collected at the conclusion of every school year to make it easily accessible for graduate studies and research of all kinds.

6. Further research definitely must be done in the area of evaluation.

PHASE III A MODEL FOR CONTINUED RESEARCH

Review of research on cooperative vocational education and synthesis of discussion of Phase I, results in this proposed general model of continued research without specifying which problem areas are of immediate concern. Hopefully, through this institute, we will establish what some of the priorities are. Curriculum and the nature of related instruction is one of the most pressing problems. In deciding what to teach, however, we must consider the desired program outcomes and the characteristics of students to be served by cooperative vocational education.

The proposed model focuses on determining what kinds of program practices and procedures are effective in helping individuals achieve specified outcomes. An assumption is made that cooperative vocational education and what happens to its students is generally good. Our task is to determine how program variables (practices, content, conditions, etc.) interact with student characteristics (ability, background, etc.) to affect outcomes.

Program Outcomes

It is very difficult to design a program of research when the people who are involved in cooperative vocational education have different expectations, purposes and concepts of a program. As one listens to legislators, school administrators, counselors, employers, labor representatives, and even informed groups of vocational educators, one finds that different groups conceive the purposes differently. Those of us who have been working with programs are deeply concerned with the current overwhelming desire on the part of some educators to release students from school to go to work without making adequate provisions for supervision and related vocational instruction -- and then calling the program cooperative vocational education.

The educational purposes of work experience may be categorized as follows:

Community Service: learning adult-citizen-worker roles and participating in constructive community activities

Financial Support: earning in order to remain in school and maintaining some degree of financial independence

General Education: learning to apply general education to real life situations and learning general work behaviors and habits

Career Guidance: learning about oneself and the "world of work" in order to make satisfying career plans and choices for the future

Occupational Preparation: developing the concepts, skills, competencies, and attitudes necessary to perform an occupation or a cluster of occupations for which the student has chosen to prepare.

Many problems are experienced when the purposes are not understood and accepted by the people who participate in the program -- students, employers, etc. Without a carefully selected and well defined "target" the people who participate do not know where or how to direct their efforts and resources.

The first step in planning research for cooperative vocational education is getting some agreement on the desired outcomes. Most of the participants here who represent vocational education would agree that occupational preparation is the major purpose, even though certain programs may place varying degrees of emphasis on general work habits and career guidance.

At the AVA convention in Boston in December, the staff from the Minnesota Research Coordination Unit presented a paper on "The Development of a State-Operated Evaluation System." These seem to be appropriate outcomes for cooperative vocational education. A specific research question which results from their presentation needs answering: what are the generalizable task performance expectations of cooperative students. What competencies do young people need to make the transition from school to work? These competencies then become the desired outcomes and instructional objectives for our programs. Then we design learning experiences (in-school and on the job) to develop these competencies. The learning experiences are tried out with different groups of students and measures are applied to determine if the learning experiences (program variables) achieve the desired outcomes. In addition to measuring general outcomes such as job satisfaction, job performance, and employment history, we need to be concerned with the effects different program inputs have with different groups of students.

One of the problems in drawing conclusions from studies of outcomes is that there are many intervening variables which are difficult to account for. One had to be very cautious about measuring outcomes six months after graduation and completion of a program and making inferences about the effect of program variables on the outcomes.

Program Characteristics

In the past much of our research and evaluation has focused on inventorying program characteristics. We have evaluated programs on the basis of whether or not they had certain characteristics or followed certain practices which experts considered to be important, e.g. training plans, advisory committees, individual study guides, etc. By employing regressional analysis techniques and better trained researchers, we should be able to conduct studies which indicate that variation in program outcomes are related to differences in program characteristics. The program characteristics which might be studied are:

1. Teacher-Coordinator - personality types, professional training, occupational experience, age, sex, etc.

2. Facilities and Resources - classroom or lab, equipment, community resources, materials

3. Advisory Committee - composition, activities

4. Public Relations - audiences, appeals, media, timing

5. Recruitment and Selection of Students

6. Vocational Guidance - antecedent services, concurrent activities, continued services

7. Pre-employment Education - general education, vocational education, career guidance

8. Special services - remedial instruction, personal counseling

9. Selection and Development of Training Stations - criteria for selection, sponsor development

10. On-The-Job Experiences - training plans, rotation of jobs

11. Vocational Youth Organization - participation, activities

12. Classroom Instruction - group vs. individual, general vs. specific, correlation with job, methods of instruction

13. Evaluation of Student Performance - self-evaluation, employer evaluation, teacher evaluation

Student Characteristics

There have been very few questions raised about variations in outcomes related to differences in student characteristics, except the rather general question of can we achieve the same outcomes for the disadvantaged student in cooperative vocational education. Whereas the 1968 Amendments authorize funds to expand programs to serve new groups of students, it is intended that these students will reach comparable levels of occupational adjustment -- that is they will be prepared for occupations which they will find satisfying and in which they will be satisfactory employees.

The 1968 Vocational Education Amendments can be interpreted to say that our task is to identify individuals who can benefit from cooperative vocational education and then design programs to suit their individual abilities and needs. In the past, selection was a matter of taking students who met the criteria we established for the programs that were in operation. While it is still mandatory that we know what occupations are available and what skills and personal qualifications are necessary to perform the occupations, we must give more attention to planning programs which will satisfy the needs of people in terms of the abilities and interests they have. This implies that schools will offer a much wider range of training choices and that more attention will be given to counseling and to assist individuals choose appropriate training programs. In order to plan programs to satisfy individual needs, we will need to know more about student characteristics. What levels and kinds of individual characteristics (e.g. interests, aptitudes, values, etc.) that students bring to cooperative programs affect the program variables we use to achieve the desired outcomes?

The following is an overall classification of student characteristics:

1. Basic Competencies - general (intelligence, achievement, rank) specific (reading, writing, typing, manual skills)
2. Specific Disabilities - mental or physical handicaps, social deviation
3. Learning and Retention Characteristics - rate, transfer, media or style (verbal, experential, programmed instruction)
4. Volitional Characteristics - attitudes (toward school, toward work), interests (career, subject matter), values (money, education, social service), goals (occupational, educational) motivations (money, parental pressure, achievement)
5. Personality - self-concepts (esteem, expectations), interaction modes (extrovert, introvert, domination, submission), coping mechanisms (dependence, withdrawal)
6. Background - genetic, ethnic, economic
7. Prospects for Future- college, marriage, self-support
8. Physical Characteristics - height and weight, appearance, health
9. Developmental State - chronological age, vocational maturity emancipation
10. Sex

The program variables which are likely to change with student characteristics are the occupations for which training is given, the nature of the related instruction (content and method), special services, attention given to guidance, and the antecedent or pre-employment training that is given.

Summary

A specific research problem derived from the proposed model might be to compare job performance ratings of students who had had pre-employment vocational instruction with students who have had no prior vocational training and taking into account differences in student ability levels. There are many ways of using a model of this nature to make decisions about how programs should be operated taking into consideration the desired outcomes and the characteristics of students to be served.

Two problems which were suggested related to the proposed model are: (1) a study of the additional costs that accrue to employers as a result of employing cooperative students, and (2) development of a model for a local school to use in assessing local manpower needs and employment opportunities.

EVALUATION FORM FOR INSTITUTE PARTICIPANTS

Please complete and return this evaluation form before the end of the week. If it becomes necessary to complete the form after you leave, please return it promptly.

1. What type of institution or educational unit do you represent?

   ☐ U. S. Office of Education
   ☐ State Education Department
   ☐ Cooperative Education Director or Supervisor
   ☐ University or College Representative
   ☐ Other . . . .

2. What was the nature of your participation at the Institute?

   ☐ Part-Time Institute Participant
   ☐ Full-time Institute Participant
   ☐ Discussion Group Recorder
   ☐ Discussion Group Chairman
   ☐ Discussion Coordinator
   ☐ Consultant-Leader

3. Do you feel that the objectives of the Institute were clearly established?

   1) Co-op Programs in Vocational Education
   2) State Responsibilities and Activities
   3) Teacher Education Programs
   4) Large and Small Community Programs
   5) In-School and On-Job Instruction
   6) The Vocational Needs of People
   7) Manpower Needs and Job Opportunities
   8) Funding Resources and Criteria
   9) Strategies for Working with Employers
   10) Co-op Program Evaluation

4. In terms of advancing cooperative programs, select from the above topics:

The Three Most Vital Topics	The Three Least Vital Topics
a.	a. . . . .
b.	b. . . . .
c.	c. . . . .

5. Question-and-answer periods following consultants' presentations were

   ☐ Too Long ☐ Adequate ☐ Too Short

6. Consultants were adequately used as resource personnel ☐ Yes ☐ No

7. Daily routine was ☐ Good ☐ Adequate

Suggested change: . . . .

8. Do you feel that the interest-group work sheets were effective in guiding discussions? ☐ Yes ☐ No

9. Interest-group sizes were ☐ Too large ☐ Satisfactory ☐ Too small

10. Were you given adequate opportunity to contribute in small-group discussions? ☐ Yes ☐ No

11. Do you feel that you have helped provide sufficient direction for continuation into Phase Ii of the Institute? ☐ Yes ☐ No

12. Please briefly express your opinion of the form which a summary report of Phase I of the Institute should take.

13. Upon completion of Phase II of the Institute, do you plan to be available for participation in Phase III? ☐ Yes ☐ No

14. Please describe any of your own research or writing, recently completed or in progress, which might contribute to the goals of the Institute.

15. Please indicate any research activities or projects identified during the Institute in which you would be willing to participate.

16. Other Comments:

NAME: . . . .

PHASE III PARTICIPANT REACTION FORM
May 1970

1. What type of institution or educational unit do you represent?

   ☐ U. S. Office of Education
   ☐ State Education Department
   ☐ Cooperative Education Director or Supervisor
   ☐ University or College Representative
   ☐ Other (specify) ____

2. The stated purposes of the Institute were "to create awareness, concerning new approaches of program implementation to serve urban, suburban, and rural areas at various educational levels and establish stronger relationship with vocational and total education."

   a. In terms of your own work responsibilities, how much useful new information was brought to your attention during Phase III of the Institute? Please mention specific instances.

   b. In terms of your own work responsibilities, what new ideas about program development did you receive?

   c. In what ways and to what extent has the Institute helped you, personally, in strengthening relationships with vocational and total education?

3. Presentations by Consultant-Leaders.

   a. Please indicate with a ranking of 1, 2, or 3 the three topics that seemed most important and timely to you on the basis of the presentation.

      1.

      2.

      3.

   b. What, if anything, do you feel was a major omission either in the list of topics or in their treatment by the consultant-leaders?

      ____

      ____

      ____

      ____

   c. Any other comments about the major presentations?

      ____

      ____

      ____

      ____

4. Group discussions.

   a. Did you have enough opportunity to present your own ideas in the group discussions? If not, explain why.

      ____

      ____

      ____

   b. In general, how interesting and worthwhile did you find the group discussions?

      ____

      ____

      ____

c. Should more time, less time, or the same amount of time have been allowed for group discussions?

☐ More ☐ Less ☐ Same Amount

5. General impact of Institute. (Phase I, II, III)

a. In which phases did you participate?

☐ PHASE I ☐ PHASE II ☐ PHASE III

b. Did you have contact with a consultant-leader during PHASE II?

☐ Yes ☐ No

c. Did you carry on any projects related to co-op program development or research during the period of PHASE II (Nov. 1969 to May, 1970)?

☐ Yes ☐ No

d. Have you any results to share with others that were not distributed during PHASE III?

____

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____

____

e. What was your over-all impression of the Institute?

____

____

____

____

Your name____________________

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